U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

SEARCH REQUEST FORM

Requestor's Name: Natalie Dairie Serial Number: 09/764918

Date: 1-30-02 Phone: 308-6410 Art Unit: 1642

Mailbox: 7E12

Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

Please search claims 1-27, 34 & 44-53 & 54-62 for a chimeric polypeptide comprising serum albumin having an A-B-C (claim 2), wherein the polypeptide comprises an angiogenesis-inhibiting protein fragment (claims 4-5). The chimeric protein binds to a tyrosine kinase receptor (claim 8), the peptide sequence is inserted into a cysteine loop (claims 49-50).

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JAN 31 2002
GROUP 1600

BEST AVAILABLE COPY

Point of Contact:
Alex Waclawiw
Technical Info. Specialist
CM1 12C14 Tel: 308-4491

STAFF USE ONLY

Date Completed: 2-11-02

Searcher: _____

Terminal time: _____

Elapsed time: _____

CPU time: 0.42 12

Total time: _____

Number of Searches: _____

Number of Databases: _____

P.H. 2-11-02

Search Site	Vendors
____ STIC	____ IG Suite
✓ CM-1	✓ STN
____ Pre-S	____ Dialog
Type of Search	____ APS
____ N.A. Sequence	____ Geninfo
____ A.A. Sequence	____ SDC
____ Structure	____ DARC/Questel
____ Bibliographic	____ Other

1 3

PTO-1590 (9-90)

USCOMM-DC 90-3952

```
=> d his

     (FILE 'HOME' ENTERED AT 13:04:51 ON 11 FEB 2002)

     FILE 'REGISTRY' ENTERED AT 13:06:06 ON 11 FEB 2002
                E ANGIOSTATIN/CN
L1            1 S E3
                E ENDOSTATIN/CN
L2            1 S E3

     FILE 'HCAPLUS' ENTERED AT 13:06:42 ON 11 FEB 2002
L3        16244 S ALBUMIN (L) SERUM
L4        61074 S ALBUMIN#
L5         3470 S (FUSION OR CHIMER? ) (L) (PEPTIDE# OR PROTETIN# OR POLYPEPTID
L6        19894 S (FUSION OR CHIMER? ) (L) (PEPTIDE# OR PROTEIN# OR POLYPEPTIDE
L7          495 S L1 OR L2 OR ANGIOSTATIN# OR ENDOSTATIN#
L8          553 S ANGIOGENESIS (L) INHIBIT? (L) (PROTEIN# OR PEPTIDE# OR POLYPE
L9          996 S L7 OR L8
L10         118 S L4 (L) L6
L11           4 S L10 AND L9
L12          18 S L4 AND L9
L13     1186355 S PROTEIN# OR POLYPEPTIDE# OR PEPTIDE#
L14          18 S L12 AND L13
L15         485 S HETEROLOGOUS (2A) SEQUENCE#
L16         621 S (HETEROLOGOUS (2A) SEQUENCE#)/AB
L17        1061 S L16 OR L15
L18           2 S L17 AND L14
L19           6 S L14 AND (CHIMER? OR FUSION? OR CHIMER?/AB OR FUSION?/AB)
L20           6 S L18 OR L19
L21          12 S L14 NOT L20
```

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=> fil reg
FILE 'REGISTRY' ENTERED AT 13:14:51 ON 11 FEB 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2002 American Chemical Society (ACS)

STRUCTURE FILE UPDATES:    8 FEB 2002  HIGHEST RN 391197-07-2
DICTIONARY FILE UPDATES:   8 FEB 2002  HIGHEST RN 391197-07-2

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Calculated physical property data is now available.  See HELP PROPERTIES
for more information.  See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

The P indicator for Preparations was not generated for all of the
CAS Registry Numbers that were added to the H/Z/CA/CAplus files between
12/27/01 and 1/23/02.  Use of the P indicator in online and SDI searches
during this period, either directly appended to a CAS Registry Number
or by qualifying an L-number with /P, may have yielded incomplete results.
As of 1/23/02, the situation has been resolved.  Also, note that searches
conducted using the PREP role indicator were not affected.

Customers running searches and/or SDIs in the H/Z/CA/CAplus files
incorporating CAS Registry Numbers with the P indicator between 12/27/01
and 1/23/02, are encouraged to re-run these strategies.  Contact the
CAS Help Desk at 1-800-848-6533 in North America or 1-614-447-3698,
worldwide, or send an e-mail to help@cas.org for further assistance or to
receive a credit for any duplicate searches.

=> d que l1;d l1
L1             1 SEA FILE=REGISTRY ABB=ON ANGIOSTATIN/CN


L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2002 ACS
RN   86090-08-6  REGISTRY
CN   Angiostatin (9CI)  (CA INDEX NAME)
MF   Unspecified
CI   MAN
LC   STN Files:   ADISINSIGHT, ADISNEWS, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,
       CANCERLIT, CAPLUS, CEN, CHEMCATS, CIN, EMBASE, IPA, MEDLINE, NAPRALERT,
       PROMT, RTECS*, TOXCENTER, TOXLIT, USPATFULL
         (*File contains numerically searchable property data)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
            272 REFERENCES IN FILE CA (1967 TO DATE)
             13 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            273 REFERENCES IN FILE CAPLUS (1967 TO DATE)


=> d que l2;d l2
```

L2 1 SEA FILE=REGISTRY ABB=ON ENDOSTATIN/CN

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 187888-07-9 REGISTRY
CN **Endostatin (9CI)** (CA INDEX NAME)
MF Unspecified
CI MAN
SR CA
LC STN Files: ADISINSIGHT, BIOSIS, BIOTECHNO, CA, CAPLUS, EMBASE, IPA, MRCK*, TOXCENTER, TOXLIT, USPATFULL
(*File contains numerically searchable property data)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
237 REFERENCES IN FILE CA (1967 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
240 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 13:15:05 ON 11 FEB 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 8 Feb 2002 VOL 136 ISS 7
FILE LAST UPDATED: 30 Jan 2002 (20020130/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.
'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d his l3-

(FILE 'REGISTRY' ENTERED AT 13:06:06 ON 11 FEB 2002)

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     FILE 'HCAPLUS' ENTERED AT 13:06:42 ON 11 FEB 2002
L3        16244 S ALBUMIN (L) SERUM
L4        61074 S ALBUMIN#
L5         3470 S (FUSION OR CHIMER? ) (L) (PEPTIDE# OR PROTETIN# OR POLYPEPTID
L6        19894 S (FUSION OR CHIMER? ) (L) (PEPTIDE# OR PROTEIN# OR POLYPEPTIDE
L7          495 S L1 OR L2 OR ANGIOSTATIN# OR ENDOSTATIN#
L8          553 S ANGIOGENESIS (L) INHIBIT? (L) (PROTEIN# OR PEPTIDE# OR POLYPE
L9          996 S L7 OR L8
L10         118 S L4 (L) L6
L11           4 S L10 AND L9
L12          18 S L4 AND L9
L13     1186355 S PROTEIN# OR POLYPEPTIDE# OR PEPTIDE#
L14          18 S L12 AND L13
L15         485 S HETEROLOGOUS (2A) SEQUENCE#
L16         621 S (HETEROLOGOUS (2A) SEQUENCE#)/AB
L17        1061 S L16 OR L15
L18           2 S L17 AND L14
L19           6 S L14 AND (CHIMER? OR FUSION? OR CHIMER?/AB OR FUSION?/AB)
L20           6 S L18 OR L19
L21          12 S L14 NOT L20

     FILE 'REGISTRY' ENTERED AT 13:14:51 ON 11 FEB 2002

     FILE 'HCAPLUS' ENTERED AT 13:15:05 ON 11 FEB 2002

=> d .ca 120 1-6;d .ca 121 1-12

L20  ANSWER 1 OF 6  HCAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         2002:6707  HCAPLUS
DOCUMENT NUMBER:          136:80858
TITLE:                    Methods and compositions for polypeptide
                          engineering by DNA shuffling and/or recursive sequence
                          recombination
INVENTOR(S):              Patten, Phillip A.; Stemmer, Willem P. C.
PATENT ASSIGNEE(S):       Maxygen, Inc., USA
SOURCE:                   U.S., 71 pp., Cont.-in-part of U.S. 5,830,721.
                          CODEN: USXXAM
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   13
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.   DATE
     ---------------   ----  --------       ---------------   --------
     US 6335160         B1   20020101       US 1996-769062    19961218
     WO 9522625         A1   19950824       WO 1995-US2126    19950217
         W:  AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
             GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG,
             MN, MW, MX, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT,
             UA, UG
         RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
             LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE,
             SN, TD, TG
     US 5811238         A    19980922       US 1995-564955    19951130
     US 5830721         A    19981103       US 1996-537874    19960304
     US 6117679         A    20000912       US 1996-621859    19960325
     US 5837458         A    19981117       US 1996-650400    19960520
     WO 9720078         A1   19970605       WO 1996-US19256   19961202
         W:  AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
```

DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

WO 9827230 A1 19980625 WO 1997-US24239 19971217
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9857292 A1 19980715 AU 1998-57292 19971217
AU 732146 B2 20010412
EP 946755 A1 19991006 EP 1997-953571 19971217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
JP 2001506855 T2 20010529 JP 1998-528054 19971217
EP 1149904 A1 20011031 EP 2001-202349 19971217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
EP 1149905 A1 20011031 EP 2001-202350 19971217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
AU 9923816 A1 19990812 AU 1999-23816 19990416
US 6303344 B1 20011016 US 1999-339913 19990624
US 6319713 B1 20011120 US 1999-339904 19990625

PRIORITY APPLN. INFO.:
WO 1995-US2126 A2 19950217
US 1995-564955 A2 19951130
US 1996-537874 A2 19960304
US 1996-621859 A2 19960325
US 1996-650400 A2 19960520
WO 1996-US19256 A2 19961202
US 1994-198431 A2 19940217
AU 1995-29714 A3 19950217
US 1995-425684 A2 19950418
US 1996-621430 B2 19960325
WO 1996-US5480 A2 19960418
US 1996-721824 B2 19960520
US 1996-675502 A2 19960703
US 1996-722660 B2 19960927
US 1996-769062 A1 19961218
EP 1997-953571 A3 19971217
WO 1997-US24239 W 19971217

AB Methods are provided for the evolution of proteins of industrial and pharmaceutical interest, including methods for effecting recombination and selection. Compns. produced by these methods are also disclosed. Methods of the invention are claimed for use with a no. of mammalian and nonmammalian proteins, peptides, and hormones. Methods are specifically claimed for use with interferon .alpha.. Evolved proteins produced by the method are also claimed. The methods for producing a recombinant DNA encoding a protein are called recursive sequence recombination and are also known as DNA shuffling. The methods involve digesting two homologous DNA substrates (which contain some nucleotide differences) with restriction enzymes, optionally mutagenizing the DNA, optionally amplifying the fragments using PCR, ligating the mixt. of DNA fragments,

screening or selecting the resulting products for a desired property, recovering a recombinant DNA mol. encoding an evolved protein, and repeating these steps. The methods also include performing the above steps with DNA libraries or gene libraries and creating libraries of recombinant DNA mols. In addn., methods of the invention include producing recombinant nucleic acids by assembly PCR using bridge oligonucleotides, which have a subsequence complementary to a segment in a first nucleic acid and a subsequence complementary to a segment in a second nucleic acid. An example of the invention is engineering of bovine intestinal alk. phosphatase by assembly of 60-mer oligonucleotides. The central 20 bases of the 60-mers encode a wild-type protein with degenerate but not rarely used codons for the recombinant host cell. Twenty bases on each end of the 60-mers encode non-degenerate preferred codons. Such a BIAP codon usage library is cloned in an expression vector, expressed in Escherichia coli, colonies are screened using a chromogenic enzyme substrate, and DNA from the most colorful colonies is subjected to recursive sequence recombination. Another example is construction of recombinant variants of 11 natural human interferon .alpha. proteins. Degenerate oligonucleotides can be used to capture most of the diversity of the natural interferon .alpha. proteins and so recursive sequence recombination could involve permuting PCR-amplified segments of interferon .alpha. genes.

IC ICM C07H021-02
ICS C07H021-04; C12P019-34; C12Q001-68

NCL 435006000

CC 3-2 (Biochemical Genetics)
Section cross-reference(s): 2, 6, 7, 10, 13, 15

ST **protein** genetic engineering DNA shuffling recursive sequence recombination; sequence human interferon alpha gene DNA **protein**; DNA gene library mutagenesis PCR cloning recombinant **protein**

IT **Proteins**
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(A; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Chemokines
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(C-C; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Chemokines
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(C-X-C; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Glycoproteins
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(CD40-L (antigen CD40 ligand); methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Transformation, genetic
(Cre+ host; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT **Proteins**
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(G; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Cell adhesion molecules

RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(ICAM-1 (intercellular adhesion mol. 1), sol.; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Genetic element
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(IGS (intergenic spacer), sites for segmentation; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT **Proteins**
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(antihemolytic factor; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT **Proteins**
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(apoproteins; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT **Peptides**, preparation
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(atrial; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Oligonucleotides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(bridge; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Genetic element
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(exon; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT **Proteins**
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(hedgehog; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Recombination, genetic
(homologous; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination in vivo)

IT Genetic element
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(intron, self-splicing; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Genetic element
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(intron; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Codon usage
(library; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Gene
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); BIOL (Biological study); PREP (Preparation); USES (Uses)

(library; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Genetic element
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(loxP; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Alleles
DNA shuffling
Genetic engineering
Genetic selection
Molecular cloning
Nucleic acid library
PCR (polymerase chain reaction)
(methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Primers (nucleic acid)
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Apolipoproteins
Collagens, preparation
Fibrinogens
Fibronectins
Gonadotropins
Hemoglobins
Lactoferrins
Lymphotoxin
Tumor necrosis factor receptors
Tumor necrosis factors
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT **Chimeric** gene
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); BIOL (Biological study); PREP (Preparation); USES (Uses)
(methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT **Proteins**
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(neutrophil inhibitory factor; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT **Protein** sequences
(of human interferon .alpha. subtypes)

IT **Proteins**
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(osteogenic; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Cell
(recombinant gene expression in; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Mutagenesis
(recursive sequence recombination; methods and compns. for

polypeptide engineering by DNA shuffling and/or recursive sequence recombination)

IT Genetic element
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(restriction endonuclease cleavage site, non-palindromic ends; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT **Albumins**, preparation
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(serum; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Mutagenesis
(site-directed; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Interleukin receptors
Tumor necrosis factor receptors
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(sol.; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Antigens
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(superantigens; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Complement receptors
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(type 1, sol.; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Complement receptors
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(type 1; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Interferons
RL: BPN (Biosynthetic preparation); PRP (Properties); BIOL (Biological study); PREP (Preparation)
(.alpha.8; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT Interferons
RL: BPN (Biosynthetic preparation); PRP (Properties); BIOL (Biological study); PREP (Preparation)
(.alpha.; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT 9001-78-9, Alkaline phosphatase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(BIAP (bovine intestinal alk. phosphatase); methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT 385601-93-4P 385601-94-5P 385601-95-6P 385601-96-7P 385601-97-8P
385601-98-9P 385601-99-0P 385602-00-6P 385602-01-7P 385602-02-8P
RL: BPN (Biosynthetic preparation); PRP (Properties); BIOL (Biological study); PREP (Preparation)
(amino acid sequence; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT 8001-27-2P, Hirudin 9001-25-6P, Blood-coagulation factor VII
9001-28-9P, Factor IX 9001-29-0P, Factor X 9002-01-1P, Streptokinase

9002-64-6P, Parathyroid hormone 9002-69-1P, Relaxin 9002-72-6P, Somatotropin 9007-12-9P, Calcitonin 9014-00-0P, Luciferase 9015-94-5P, Renin, preparation 9038-70-4P, Somatomedin 9039-53-6P, Urokinase 9041-92-3P, .alpha.1-Antitrypsin 9054-89-1P, Superoxide dismutase 37228-64-1P, Glucocerebrosidase 51110-01-1P, Somatostatin 62683-29-8P, Colony stimulating factor 69521-94-4P, Thymosin .alpha.1 80295-54-1P, Complement C5a 85637-73-6P, Atrial natriuretic factor **86090-08-6P, Angiostatin** 109319-16-6P, Factor VIII 139639-23-9P, Tissue plasminogen activator 185857-51-6P, Neurturin
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT 9012-90-2P, DNA polymerase
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); BIOL (Biological study); PREP (Preparation); USES (Uses)
(methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT 9075-08-5, Restriction enzyme 59088-21-0, Uracil N-glycosylase
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT 385602-03-9 385602-04-0 385602-05-1 385602-06-2 385602-07-3
385602-08-4 385602-09-5 385602-10-8 385602-11-9 385602-12-0
385602-13-1
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(nucleotide sequence; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT 66-22-8, Uracil, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(substitution of thymidine residues in primers; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT 385607-47-6 385607-48-7 385607-49-8 385607-50-1 385607-51-2
385607-52-3 385607-53-4 385607-54-5 385607-55-6 385607-56-7
385607-57-8 385607-58-9 385607-59-0 385607-60-3 385607-61-4
385607-62-5 385607-63-6 385607-64-7 385607-65-8 385607-66-9
385607-67-0 385607-68-1 385607-69-2 385607-70-5 385607-71-6
385607-72-7 385607-73-8 385607-74-9 385607-75-0 385607-76-1
385607-77-2 385607-78-3 385607-79-4 385607-80-7 385607-81-8
385607-82-9 385607-83-0 385607-84-1 385607-85-2 385607-86-3
385607-87-4 385607-88-5 385607-89-6 385607-90-9 385607-91-0
385607-92-1 385607-93-2 385607-94-3 385607-95-4 385607-96-5
385607-97-6 385607-98-7 385607-99-8 385608-00-4 385608-01-5
385608-02-6 385608-03-7 385608-04-8 385608-05-9 385608-06-0
385608-07-1 385608-08-2 385608-09-3 385608-10-6 385608-11-7
385608-12-8 385608-13-9 385608-14-0 385608-15-1 385608-16-2
385608-17-3 385608-18-4 385608-19-5 385608-20-8 385608-22-0
RL: PRP (Properties)
(unclaimed nucleotide sequence; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT 385608-21-9
RL: PRP (Properties)
(unclaimed **protein** sequence; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)

IT 256933-30-9 385608-23-1 385608-24-2
RL: PRP (Properties)
(unclaimed sequence; methods and compns. for **polypeptide** engineering by DNA shuffling and/or recursive sequence recombination)
REFERENCE COUNT: 420 THERE ARE 420 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:936090 HCAPLUS
DOCUMENT NUMBER: 136:58776
TITLE: **Chimeric polypeptides** of serum **albumin** and uses related thereto
INVENTOR(S): Gyuris, Jeno; Lamphere, Lou
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 34 pp., Cont.-in-part of U.S. Ser. No. 619,285.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001056075	A1	20011227	US 2001-764918	20010118
PRIORITY APPLN. INFO.:			US 1999-144534 P	19990719
			US 2000-619285 A2	20000719

AB The present invention relates to **chimeric** polypeptides in which a serum albumin protein has been altered to include one or more biol. active **heterologous** peptide **sequences**. The **chimeric** polypeptides may exhibit therapeutic activity related to the **heterologous** peptide **sequences** coupled with the improved serum half-lives derived from the serum albumin protein fragments. **Heterologous** peptide **sequences** may be chosen to promote any biol. effect, including angiogenesis inhibition, antitumor activity, and induction of apoptosis. The therapeutic effect may be achieved by direct administration of the **chimeric** polypeptide, or by transfecting cells with a vector including a nucleic acid encoding such a **chimeric** polypeptide.

IC ICM A61K039-00
ICS A61K048-00; C07K014-765
NCL 514044000
CC 63-3 (Pharmaceuticals)
ST **chimeric protein** serum **albumin** antitumor
IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(MIRR, of cell surface; **chimeric polypeptides** of serum **albumin** and uses related thereto)
IT Angiogenic factors
Growth inhibitors, animal
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(angiogenic growth-inhibiting factors, **fusion proteins; chimeric polypeptides** of serum **albumin** and uses related thereto)
IT Drug delivery systems
(carriers; **chimeric polypeptides** of serum **albumin** and uses related thereto)
IT Apoptosis

Cell differentiation
Cell proliferation
Gene therapy
Genetic vectors
Retroviral vectors
Transformation, genetic
Virus vectors
(**chimeric polypeptides** of serum **albumin** and uses related thereto)

IT **Fusion proteins** (**chimeric proteins**)
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**chimeric polypeptides** of serum **albumin** and uses related thereto)

IT Orphan receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**chimeric polypeptides** of serum **albumin** and uses related thereto)

IT Nucleic acids
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**fusion protein**-encoding; **chimeric polypeptides** of serum **albumin** and uses related thereto)

IT **Angiogenesis inhibitors**
(**fusion proteins**; **chimeric polypeptides** of serum **albumin** and uses related thereto)

IT Cytokine receptors
G **protein**-coupled receptors
Ion channel
Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(of cell surface; **chimeric polypeptides** of serum **albumin** and uses related thereto)

IT **Albumins**, biological studies
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(serum, **fusion proteins**; **chimeric polypeptides** of serum **albumin** and uses related thereto)

IT Cell
(stem, transfection of; **chimeric polypeptides** of serum **albumin** and uses related thereto)

IT Blood cell
Bone marrow
Gland
Hematopoietic precursor cell
Liver
Muscle
Skin
(transfection of; **chimeric polypeptides** of serum **albumin** and uses related thereto)

IT Adeno-associated virus
Adenoviridae
Human herpesvirus
Human immunodeficiency virus
Vaccinia virus
(vectors; **chimeric polypeptides** of serum **albumin** and uses related thereto)

IT **86090-08-6P, Angiostatin 187888-07-9P, Endostatin**
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**fusion proteins; chimeric polypeptides** of serum **albumin** and uses related thereto)

IT 340830-03-7, Receptor tyrosine kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(of cell surface; **chimeric polypeptides** of serum **albumin** and uses related thereto)

IT 52-90-4, Cysteine, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**protein** loops contg.; **chimeric polypeptides** of serum **albumin** and uses related thereto)

L20 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:781079 HCAPLUS
DOCUMENT NUMBER: 135:348851
TITLE: **Albumin fusion proteins** with therapeutic **proteins** for improved shelf-life
INVENTOR(S): Rosen, Craig A.; Haseltine, William A.
PATENT ASSIGNEE(S): Human Genome Sciences, Inc, USA
SOURCE: PCT Int. Appl., 606 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001079444	A2	20011025	WO 2001-US12013	20010412

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:
US 2000-229358 P 20000412
US 2000-199384 P 20000425
US 2000-256931 P 20001221

AB The present invention encompasses **fusion** proteins of albumin with various therapeutic proteins. Therapeutic proteins may be stabilized to extend the shelf-life, and/or to retain the therapeutic protein's activity for extended periods of time in soln., in vitro and/or in vivo, by genetically or chem. fusing or conjugating the therapeutic protein to albumin or a fragment or variant of albumin. Use of albumin **fusion** proteins may also reduce the need to formulate the protein solns. with large excesses of carrier proteins to prevent loss of therapeutic proteins due to factors such as binding to the container. Nucleic acid mols. encoding the albumin **fusion** proteins of the invention are also encompassed by the invention, as are vectors contg. these nucleic acids, host cells transformed with these nucleic acids vectors, and methods of making the albumin **fusion** proteins of

the invention and using these nucleic acids, vectors, and/or host cells. Thus, plasmid vectors are constructed in which DNA encoding the desired therapeutic protein may be inserted for expression of the albumin **fusion** proteins in yeast (pPPC0005) and mammalian cells (pC4:HSA). Yeast-derived signal sequences from Saccharomyces cerevisiae invertase SUC2 gene, or the stanniocalcin or native human serum albumin signal peptides, are used for secretion in yeast or mammalian systems, resp. Thus, the **fusion** product of human growth hormone with residues 1-387 of human serum albumin retains essentially intact biol. activity after 5 wk of incubation in tissue culture media at 37.degree., whereas recombinant human growth hormone used as control lost its biol. activity in the first week. Although the potency of the albumin **fusion** proteins is slightly lower than the unfused counterparts in rapid bioassays, their biol. stability results in much higher biol. activity in the longer term in vitro assay or in vivo assays. Addnl., the present invention encompasses pharmaceutical compns. comprising albumin **fusion** proteins and methods of treating, preventing, or ameliorating diseases, disorders or conditions using albumin **fusion** proteins of the invention.

IC ICM C12N

CC 63-3 (Pharmaceuticals)
Section cross-reference(s): 3, 15

ST **albumin fusion** therapeutic **protein** shelflife

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(1-309; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(11; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(12; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(15; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(17; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(18; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interleukins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(19; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic

use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(1; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Interleukins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(21; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(2; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(331D5; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(3; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(4-1BB; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(4; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(5; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(61164; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(6; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(7; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(9; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Platelet-derived growth factors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic

use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(AA; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ACRP-30; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ADEC (adenoid expressed chemokine); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Interleukins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(AGF; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(APM-1; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Act-2; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Platelet-derived growth factors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(BB; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(BCMA; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Platelet-derived growth factors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Bv-sis; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C-C, 2; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C-C, 3; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C-C, DGWCC; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Chemokines

RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C-C, DVic-1; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C-C, ELC; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C-C, HCC-1; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C-C, IBICK; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C-C, ILINCK; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C-C, SLC (secondary lymphoid chemokine); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C-C, STCP-1; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C-X-C, 3; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C-X-C; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C10; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Troponins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(C; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(CCC3; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(CCF18; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(CCR2; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT CD antigens
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(CD27; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Glycoproteins, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(CD40-L (antigen CD40 ligand); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(CTAP-III (connective tissue activating **protein** III); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Antigens
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(CTLA-8; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokine receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(CXCR3; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Cerebus; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Chr19Kine; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Platelet-derived growth factors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(D; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Cytokine receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(DR3 (death receptor 3); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic

use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(EDAR; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Interleukins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(EDIRF I **protein**; **albumin fusion**
proteins with therapeutic **proteins** for improved
shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(EEC (eosinophil expressed chemokine); **albumin fusion**
proteins with therapeutic **proteins** for improved
shelf-life)
IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ENA-78 (epithelial neutrophil activating **protein**-78);
albumin fusion proteins with therapeutic
proteins for improved shelf-life)
IT Hemopoietins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(FLT3 ligand; **albumin fusion proteins**
with therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(HCC-1; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Troponins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(I; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(L105-7; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(LVEC-1 (liver expressed chemokine 1); **albumin fusion**
proteins with therapeutic **proteins** for improved
shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(LVEC-2 (liver expressed chemokine 2); **albumin fusion**
proteins with therapeutic **proteins** for improved
shelf-life)
IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic
use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Lyn-1; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic

use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(M110; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(M11A; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(MACK (mammary assocd. chemokine); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(MCP-3.alpha. and MCP-3.beta.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(MCP-4; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(MCPP (monocyte chemotactic proprotein); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(MDC (macrophage-derived chemokine); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Monokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(MIG (monokine induced by .gamma.-interferon); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(MIG-.beta.; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)

IT Interleukins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(MIRAP; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(MP52; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic

use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(NOGO-66; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(NOGO-A; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(NOGO-B; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(NOGO-C; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Antigens
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(OX-40; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(PF4; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(PGBC (pituitary expressed chemokine); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokine receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(RANTES; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(SISD; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(SLC (secondary lymphoid tissue chemokine); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Troponins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(T; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(TAC1; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Cytokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(TARC (thymus and activation regulated cytokine); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(TMEC (T cell mixed lymphocyte reaction expressed chemokine); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Tarc; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Tim-1; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Troy; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ZCHEMO-8; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ZSIG-35; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Drug delivery systems
Gene therapy
Molecular cloning
(**albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT CD30 (antigen)
CD40 (antigen)
Cell adhesion molecules
Cytokines
Enzymes, biological studies
Eotaxin
Erythropoietin receptors
Fas ligand
Fusion proteins (chimeric proteins
)
Granulocyte-macrophage colony-stimulating factor receptors
Growth factors, animal
Interferons
Interleukin 1
Interleukin 1 receptor antagonist
Interleukin 11
Interleukin 13
Interleukin 14

Interleukin 15
Interleukin 17
Interleukin 18
Interleukin 1.alpha.
Interleukin 1.beta.
Interleukin 3
Interleukin 4
Interleukin 4 receptors
Interleukin 5 receptors
Interleukin 6
Interleukin 6 receptors
Interleukin 8
Interleukin 8 receptors
Interleukin 9
Lymphotoxin
Monocyte chemoattractant **protein**-1
Neutrophil-activating **peptide**-2
Platelet-derived growth factors
RANTES (chemokine)
Stem cell factor
Synthetic gene
Tumor necrosis factor receptors
Tumor necrosis factors
Vascular endothelial growth factor receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interleukin 10
Interleukin 12
Interleukin 2
Interleukin 5
Interleukin 7
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(b57; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(chemokine-like **protein** PF4-414; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Growth factors, animal
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(chondromodulins, -like **protein**; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(collapsins, antibodies for; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic

use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(exodus; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Signal **peptides**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(for improved secretion in yeast or mammalian cells; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fractalkines; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Agglutinins and Lectins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(galectin-4; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(gene Patched-2; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Vascular endothelial growth factor receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(gene flt 1; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Vascular endothelial growth factor receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(gene flt 4; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(gene patched; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(glycodelin-A; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(granulocyte chemotactic **protein**-2; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(gro-.alpha.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(gro-.beta.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(gro-.gamma.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(growth-related oncogene-.alpha.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(growth-related oncogene-.beta.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(growth-related oncogene-.gamma.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Cytokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(interferon-inducible IP-10; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interleukin receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(interleukin 10 receptors; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interleukin receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(interleukin 11; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interleukin receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(interleukin 12; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interleukin receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(interleukin 13; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interleukin receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(interleukin 15; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interleukin receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(interleukin 17; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interleukin receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(interleukin 9; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(interleukin C; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(interleukin-1 accessory; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(interleukin-2 receptor assocd. p43; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Lymphokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(lymphotactins; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(macrophage inflammatory **protein** 3.alpha.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(macrophage inflammatory **protein** 3.beta.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(macrophage inflammatory **protein** 3.gamma.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Animal cell
(mammalian, recombinant expression host; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Antitumor agents
(melanoma; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monocyte chemoattractant **protein** 3; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Chemokine receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic

use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monocyte chemoattractant **protein**-1; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monocyte chemoattractant **protein**-2; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokine receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monocyte chemoattractant **protein**-4; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(neurotactin; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Growth factors, animal
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(osteogenic **protein** 2; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Tumor necrosis factor receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(p75; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Plasmid vectors
(pC4:HSA, for mammalian cell expression; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Plasmid vectors
(pPPC0005, for yeast expression; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Plasmid vectors
(pScCHSa, for yeast expression; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Plasmid vectors
(pScNHSA, for yeast expression; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Placental hormones
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(placenta-derived mitogenic factors; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Saccharomyces cerevisiae
Yeast
(recombinant expression host; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Albumins**, biological studies

RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(serum; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Genetic element
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(signal sequence, for improved secretion in yeast or mammalian cells; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Antibodies
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(single chain; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(stem cell inhibitory factor; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Growth factors, animal
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(stroma-derived growth factor 1.alpha. and 1.beta.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(therapeutic; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interleukin 1 receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(type 3; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interleukin 1 receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(type II; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interferons
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.alpha.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokine receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta. chemokine receptor CCR5; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokine receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta. chemokine receptor CCR7; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Transforming growth factors

RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.1-; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Transforming growth factors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.2-; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Chemokines
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.9; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Thrombomodulin
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 78990-62-2P, Calpain
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(10a and 10b and 10c; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 50-56-6P, Oxytocin, biological studies 9002-62-4P, Prolactin, biological studies 9002-67-9P, Luteinizing hormone 9002-68-0P, FSH 9002-72-6P, Growth hormone 9004-10-8P, Insulin, biological studies 9014-42-0P, Thrombopoietin 11000-17-2P, Vasopressin 11096-26-7P, Erythropoietin 33507-63-0P, Substance P 67763-96-6P, Insulin-like growth factor 1 83869-56-1P, GM-CSF 106096-92-8P, Acidic fibroblast growth factor 106096-93-9P, Basic fibroblast growth factor 122191-40-6P, ICE proteinase 123584-45-2P, Fibroblast growth factor 4 129653-64-1P, Fibroblast growth factor 5 130939-41-2P, Fibroblast growth factor 6 130939-66-1P, Neurotrophin 3 140208-23-7P, Plasminogen activator inhibitor-1 141760-45-4P, Furin 142243-03-6P, Plasminogen activator inhibitor-2 143011-72-7P, G-CSF 143375-33-1P, Neurotrophin 4 148348-14-5P, Fibroblast growth factor 3 151185-16-9P, Fibroblast growth factor 9 157857-21-1P, Maspin 164003-41-2P, Fibroblast growth factor 8 185915-22-4P, Fibroblast growth factor 13 **187888-07-9P**, **Endostatin** 193363-12-1P, Vascular endothelial growth factor D 203874-76-4P, Fibroblast growth factor 12 204719-95-9P, Fibroblast growth factor 16 214210-47-6P, Neuropilin 1 219563-02-7P, Vascular endothelial growth factor E 227018-38-4P, Neuropilin 2 271597-10-5P, Growth/differentiation factor 1 322637-18-3P, Fibroblast growth factor 18 331718-56-0P, Resistin 332350-92-2P, Bone morphogenetic **protein** receptor kinase 3
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 144114-21-6, Retropepsin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 127464-60-2P, Vascular endothelial growth factor
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(isoforms; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 127361-02-8DP, **Albumin** (human blood serum clone HSA-II/HSA-I-A **protein** moiety reduced), full-length or subfragment **fusion** products
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nucleotide sequence; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 155945-98-5, PN: US5962255 SEQID: 59 unclaimed DNA 156163-00-7 167728-69-0 167728-70-3 167728-71-4 167728-72-5 167728-73-6 167731-70-6 167731-74-0, PN: US5962255 SEQID: 56 unclaimed DNA 167731-75-1, PN: US5962255 SEQID: 57 unclaimed DNA 167731-76-2, PN: US5962255 SEQID: 58 unclaimed DNA 167731-77-3, PN: US5962255 SEQID: 60 unclaimed DNA 167731-78-4, PN: US5962255 SEQID: 61 unclaimed DNA 167731-79-5 167731-80-8 167731-81-9 167732-10-7 167732-11-8, PN: US5962255 SEQID: 551 unclaimed DNA 167732-12-9 167732-13-0 167732-14-1, PN: US5962255 SEQID: 554 unclaimed DNA 167732-15-2, PN: US5962255 SEQID: 555 unclaimed DNA 167732-16-3 167732-17-4 167732-18-5 167732-19-6, PN: US5962255 SEQID: 98 unclaimed DNA 167732-20-9, PN: US5962255 SEQID: 572 unclaimed DNA 167732-21-0 167732-22-1, PN: US5962255 SEQID: 574 unclaimed DNA 195164-37-5 217893-77-1, GenBank A63614 217893-78-2, GenBank A63615 217893-79-3, GenBank A63616 217893-80-6, GenBank A63617 217893-81-7, GenBank A63618 217893-82-8, GenBank A63619 217893-83-9, GenBank A63620 217893-84-0, GenBank A63621 217893-85-1, GenBank A63622 217893-86-2, GenBank A63624 217893-89-5, GenBank A63627 217893-90-8, GenBank A63628 217893-91-9, GenBank A63629 217893-92-0, GenBank A63630 244008-03-5, PN: WO9947540 SEQID: 3 unclaimed DNA 367319-52-6 367319-53-7 367319-54-8 367319-55-9 367319-56-0 367319-57-1 367319-58-2 367319-59-3 367319-60-6 367319-61-7 367319-62-8 367319-63-9 367319-64-0 367319-65-1 367319-66-2 370965-07-4 370965-08-5
RL: PRP (Properties)
(unclaimed nucleotide sequence; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 122024-47-9 131748-18-0 244008-06-8, PN: WO9947540 SEQID: 4 unclaimed DNA 244008-07-9, PN: WO9947540 SEQID: 5 unclaimed DNA 244008-08-0, PN: WO9947540 SEQID: 6 unclaimed DNA 244008-09-1, PN: WO9947540 SEQID: 7 unclaimed DNA 244008-12-6, 8: PN: WO0183510 SEQID: 8 unclaimed DNA 244008-13-7, PN: WO9947540 SEQID: 9 unclaimed DNA 367273-46-9 367273-47-0 367273-48-1 371149-71-2
RL: PRP (Properties)
(unclaimed sequence; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 102510-92-9P, Inhibin A
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.alpha.- and .beta.-subunits; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 9061-61-4P, Nerve growth factor
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

L20 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:781078 HCAPLUS
DOCUMENT NUMBER: 135:348850

TITLE: **Albumin fusion proteins** with therapeutic **proteins** for improved shelf-life
INVENTOR(S): Rosen, Craig A.; Haseltine, William A.
PATENT ASSIGNEE(S): Human Genome Sciences, Inc., USA
SOURCE: PCT Int. Appl., 374 pp.
CODEN: PIXXD2
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FAMILY ACC. NUM. COUNT: 7
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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:
US 2000-229358 P 20000412
US 2000-199384 P 20000425
US 2000-256931 P 20001221

AB The present invention encompasses **fusion** proteins of albumin with various therapeutic proteins. Therapeutic proteins may be stabilized to extend the shelf-life, and/or to retain the therapeutic protein's activity for extended periods of time in soln., in vitro and/or in vivo, by genetically or chem. fusing or conjugating the therapeutic protein to albumin or a fragment or variant of albumin. Use of albumin **fusion** proteins may also reduce the need to formulate the protein solns. with large excesses of carrier proteins to prevent loss of therapeutic proteins due to factors such as binding to the container. Nucleic acid mols. encoding the albumin **fusion** proteins of the invention are also encompassed by the invention, as are vectors contg. these nucleic acids, host cells transformed with these nucleic acids vectors, and methods of making the albumin **fusion** proteins of the invention and using these nucleic acids, vectors, and/or host cells. Thus, plasmid vectors are constructed in which DNA encoding the desired therapeutic protein may be inserted for expression of the albumin **fusion** proteins in yeast (pPPC0005) and mammalian cells (pC4:HSA). Yeast-derived signal sequences from Saccharomyces cerevisiae invertase SUC2 gene, or the stanniocalcin or native human serum albumin signal peptides, are used for secretion in yeast or mammalian systems, resp. Thus, the **fusion** product of human growth hormone with residues 1-387 of human serum albumin retains essentially intact biol. activity after 5 wk of incubation in tissue culture media at 37.degree., whereas recombinant human growth hormone used as control lost its biol. activity in the first week. Although the potency of the albumin **fusion** proteins is slightly lower than the unfused counterparts in rapid bioassays, their biol. stability results in much higher biol. activity in the longer term in vitro assay or in vivo assays. Addnl., the present invention encompasses pharmaceutical compns. comprising albumin **fusion** proteins and methods of treating, preventing, or ameliorating diseases, disorders or conditions using albumin **fusion** proteins of the invention.

IC ICM C12N

CC 63-3 (Pharmaceuticals)
Section cross-reference(s): 3, 15
ST **albumin fusion** therapeutic **protein** shelflife
IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(2; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Bone morphogenetic **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(7; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Transport **proteins**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ABC1 (ATP-binding cassette-contg. 1); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ADMP (anti-dorsalizing morphogenetic **protein**-1); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Agouti signal; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(BPI (bactericidal/permeability-increasing), 21; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Transcription factors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(BRCA1; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Transcription factors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(BRCA2; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Del-1 (developmentally regulated endothelial locus-1); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(EMAP II (endothelial monocyte activating **polypeptide** II); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)
IT Troponins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic

use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(I; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Toxins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ML-I (mistletoe lectin I); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(MTP (microsomal transfer **protein**); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(NIF (neutrophil inhibitory factor); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(T1/ST2; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Glycoproteins, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(TNF-BP (tumor necrosis factor-binding **protein**); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(TRAIL (tumor necrosis factor-related apoptosis-inducing ligand); **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Drug delivery systems
Gene therapy
Molecular cloning
(**albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Arrestins
CD4 (antigen)
CTLA-4 (antigen)
Calreticulin
Cell adhesion molecules
Ciliary neurotrophic factor
Cytokines
Decorins
Enzymes, biological studies
Fusion proteins (**chimeric proteins**)
Gelsolin
Growth factors, animal
Heat-shock **proteins**
Interferons
Interleukin 1
Interleukin 1 receptor antagonist

Interleukin 10
Interleukin 11
Interleukin 12
Interleukin 18
Interleukin 4
Interleukin 4 receptors
Interleukin 8
LFA-3 (antigen)
Lactoferrins
Leukemia inhibitory factor
Myelin basic **protein**
Platelet-derived growth factors
Pleiotrophins
Stem cell factor
Synthetic gene
Tumor necrosis factor receptors
Tumor necrosis factor receptors
Tumor necrosis factors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Neurotrophic factors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(brain-derived; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(chemokine-binding; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(corticotropin-releasing factor-binding; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Toxins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(diphtheria, **fusion protein** with interleukin 2; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Toxins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(exotoxins, Pseudomonas, **fusion protein** with acidic fibroblast growth factor; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Signal **peptides**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(for improved secretion in yeast or mammalian cells; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interleukin 3
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(**fusion protein** with G-CSF; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interleukin 6
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**fusion proteins** with diphtheria toxin or Pseudomonas exotoxin; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(gene patched; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Neurotrophic factors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(glial-derived; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interferons
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(interferon .omega.; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(interferon-induced, 10; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Animal cell
(mammalian, recombinant expression host; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(noggins; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Plasmid vectors
(pC4:HSA, for mammalian cell expression; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Plasmid vectors
(pPPC0005, for yeast expression; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Plasmid vectors
(pScCHSa, for yeast expression; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Plasmid vectors
(pScNHSA, for yeast expression; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Hemopoietins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(progenipoietin; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Hemopoietins
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(promegapoietin; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Saccharomyces cerevisiae
Yeast
(recombinant expression host; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Antigens
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(retinal S-; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Albumins**, biological studies
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(serum; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Genetic element
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(signal sequence, for improved secretion in yeast or mammalian cells; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Antibodies
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(single chain; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Hedgehog **protein**
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(sonic; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(therapeutic; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(tie-2; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Complement receptors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(type 1; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Collagens, biological studies
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(type II; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT Interferons
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic

use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.tau.; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)

IT Interferons
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.alpha.; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)

IT Transforming growth factors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.1-; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)

IT Transforming growth factors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.2-; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)

IT Transforming growth factors
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta.3-; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)

IT Interferons
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.gamma.; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)

IT 139691-92-2P, Serine proteinase inhibitor
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(1; **albumin fusion proteins** with
therapeutic **proteins** for improved shelf-life)

IT 9001-91-6DP, Lys-plasminogen, de-(1-76) derivs.
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Lys-plasminogen; **albumin fusion proteins**
with therapeutic **proteins** for improved shelf-life)

IT 9001-42-7P, .alpha.-Glucosidase 9002-01-1P, Streptokinase 9002-12-4P, Urate oxidase 9002-61-3P, Chorionic gonadotropin 9002-67-9P, Luteinizing hormone 9002-68-0P, FSH 9002-69-1P, Relaxin 9002-72-6P, Growth hormone 9003-98-9P, DNase 9004-10-8P, Insulin, biological studies 9007-92-5P, Glucagon, biological studies 9014-42-0P, Thrombopoietin 9015-68-3P, Asparaginase 9025-35-8P, .alpha.-Galactosidase 9026-93-1P, Adenosine deaminase 9035-55-6P, Adiposin 9039-53-6P, Urokinase 9040-61-3P, Staphylokinase 9054-89-1DP, Superoxide dismutase, **fusion protein** with butulin 9061-61-4P, Nerve growth factor 9073-56-7P, .alpha.-L-Iduronidase 9088-41-9P, Kunitz proteinase inhibitor 11096-26-7P, Erythropoietin 37228-64-1P, .beta.-Glucocerebrosidase 42616-25-1P, Methioninase 55354-43-3P, Arylsulfatase B 62229-50-9P, Epidermal growth factor 67763-96-6P, Insulin-like growth factor 1 76901-00-3P, Platelet activating factor acetylhydrolase 82707-54-8P, Neprilysin 83652-28-2P, Calcitonin gene-related **peptide** 83869-56-1P, GM-CSF **86090-08-6P, Angiostatin** 99149-95-8P, Saruplase 104625-48-1P, Activin A 105844-41-5P, Plasminogen activator inhibitor 106096-92-8DP, Acidic fibroblast growth factor, **fusion protein** with Pseudomonas exotoxin 106096-92-8P 106096-93-9P, Fibroblast growth factor 2 107231-12-9DP, Botulin, **fusion protein** with superoxide dismutase

116036-70-5P, Fibrolase 130939-66-1P, Neurotrophin 3 139639-23-9P, Tissue-type plasminogen activator 143011-72-7P, G-CSF 145137-38-8P, Desmoteplase 153858-68-5P, Contortrostatin 157857-21-1P, Maspin 163658-39-7P, Prosaptide 169494-85-3P, Leptin 186270-49-5P, Angiopoietin 1 194368-66-6P, Angiopoietin 2 194554-71-7P, Tissue factor pathway inhibitor 195009-21-3P, Glial growth factor 2 196488-72-9P, Ranpirnase 197980-93-1P, Pigment epithelium-derived factor 205944-50-9P, Osteoprotegerin 244019-30-5P, Vascular endothelial growth factor 1 320336-96-7P, Kistrin 362605-29-6P, Keratinocyte growth factor 1
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 9000-95-7P, Apyrase
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ecto-; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 9002-79-3P, MSH
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**fusion** products with diphtheria toxin; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 127361-02-8DP, **Albumin** (human blood serum clone HSA-II/HSA-I-A **protein** moiety reduced), full-length or subfragment **fusion** products
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nucleotide sequence; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 131748-18-0 156163-00-7 217893-77-1, GenBank A63614 217893-78-2, GenBank A63615 217893-79-3, GenBank A63616 217893-80-6, GenBank A63617 217893-81-7, GenBank A63618 217893-82-8, GenBank A63619 217893-83-9, GenBank A63620 217893-84-0, GenBank A63621 217893-85-1, GenBank A63622 217893-86-2, GenBank A63624 217893-89-5, GenBank A63627 217893-90-8, GenBank A63628 217893-91-9, GenBank A63629 217893-92-0, GenBank A63630 367319-52-6 367319-53-7 367319-54-8 367319-55-9 367319-56-0 367319-58-2 367319-59-3 367319-60-6 367319-61-7 367319-62-8 367319-63-9 367319-64-0 367319-65-1 367319-66-2
RL: PRP (Properties)
(unclaimed nucleotide sequence; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 229477-44-5 244008-03-5, PN: WO9947540 SEQID: 3 unclaimed DNA 244008-06-8, PN: WO9947540 SEQID: 4 unclaimed DNA 244008-07-9, PN: WO9947540 SEQID: 5 unclaimed DNA 244008-08-0, PN: WO9947540 SEQID: 6 unclaimed DNA 244008-09-1, PN: WO9947540 SEQID: 7 unclaimed DNA 244008-12-6, 8: PN: WO0183510 SEQID: 8 unclaimed DNA 244008-13-7, PN: WO9947540 SEQID: 9 unclaimed DNA 244008-14-8, PN: WO9947540 SEQID: 10 unclaimed DNA 367273-46-9 367273-47-0 367273-48-1 370571-84-9
RL: PRP (Properties)
(unclaimed sequence; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

IT 114949-22-3P, Activin
RL: BPN (Biosynthetic preparation); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(.beta.c; **albumin fusion proteins** with therapeutic **proteins** for improved shelf-life)

L20 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:473659 HCAPLUS
DOCUMENT NUMBER: 135:205729
TITLE: Microarray analysis of the in vivo effects of hypophysectomy and growth hormone treatment on gene expression in the rat
AUTHOR(S): Flores-Morales, Amilcar; Stahlberg, Nina; Tollet-Egnell, Petra; Lundeberg, Joakim; Malek, Renae L.; Quackenbush, John; Lee, Norman H.; Norstedt, Gunnar
CORPORATE SOURCE: Department of Molecular Medicine, Karolinska Institute, Stockholm, 17176, Swed.
SOURCE: Endocrinology (2001), 142(7), 3163-3176
CODEN: ENDOAO; ISSN: 0013-7227
PUBLISHER: Endocrine Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The authors used cDNA microarrays contg. 3000 different rat genes to study the consequences of severe hormonal deficiency (hypophysectomy) on the gene expression patterns in heart, liver, and kidney. Hybridization signals were seen from a majority of the arrayed cDNAs; nonetheless, tissue-specific expression patterns could be delineated. Hypophysectomy affected the expression of genes involved in a variety of cellular functions. Between 16-29% of the detected transcripts from each tissue changed expression level as a reaction to this condition. Chronic treatment of hypophysectomized animals with human GH also caused significant changes in gene expression patterns. The study confirms previous knowledge concerning certain gene expression changes in the above-mentioned situations and provides new information regarding hypophysectomy and chronic human GH effects in the rat. Furthermore, the authors have identified several new genes that respond to GH treatment. The results represent a first step toward a more global understanding of gene expression changes in states of hormonal deficiency.

CC 2-5 (Mammalian Hormones)
Section cross-reference(s): 3

IT ~~Gene, animal~~
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(14-3-3 **protein** .zeta.-subtype-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(14-3-3 **protein**, .zeta.-subtype; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(2, urinary **protein** 2 precursor/ATPase inhibitor; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(Bcl-x, apoptosis inhibitor Bcl-x; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in

rat)
IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(DAD-1 (defender against apoptotic cell death 1); microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)
IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(DNA-binding **protein** inhibitor ID-1-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)
IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(DNA-binding **protein** inhibitor ID-I-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)
IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(DNA-binding, DNA-binding **protein** inhibitor ID-1; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)
IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(DNA-binding, DNA-binding **protein** inhibitor ID-I; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)
IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(DnaJ **protein** mouse homolog-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)
IT Chaperonins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(DnaJ, DnaJ **protein** mouse homolog; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)
IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(E1B 19K/Bcl 2 binding **protein** homolog-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)
IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(HARP (hepatic fibrinogen-angiopoietin related **protein**); microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)
IT Insulin-like growth factor-binding **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(IGF-BP-2; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)
IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(L10; microarray anal. of in vivo effects of hypophysectomy and growth

hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(L19; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(L23, L23a; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(L32; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(L34; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(L37a; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(L44; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(L5; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(L7; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(L9; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(La/SS-B **protein**-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(La/SS-B **protein**; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(MGP (matrix .gamma.-carboxyglutamic acid-contg. **protein**),

matrix Gla **protein**; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(N-myc downstream-regulated 2; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(Na+/H+-exchange **protein** isoform 1-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT G **proteins** (guanine nucleotide-binding **proteins**)
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(Rab3B; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(S15, S15a; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(S18; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(S19; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(S4; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(S8; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(S9; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Elongation factors (**protein** formation)
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(Tu transition elongation factor; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Transport **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(amino acid-transporting, glycoprotein-assocd. amino acid transporter BAT1; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(amyloid precursor-like **protein** mouse; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(atrial natriuretic **peptide**-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(brain natriuretic **peptide**-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(brown fat uncoupling **protein**-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Uncoupling **protein**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(brown fat uncoupling **protein**; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(collagen .alpha.1 type XVIII/**endostatin** precursor-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Collagens, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(collagen .alpha.1 type XVIII/**endostatin** precursor; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(desmoplakins I; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(endoplasmic reticulum transmembrane **protein**-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(extracellular matrix-assocd., 1; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Transport **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(fatty acid-transporting; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT G **proteins** (guanine nucleotide-binding **proteins**)
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)
(gene rab, Rab GDP dissocn. inhibitor .alpha.; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(glioma tumor suppressor candidate region 2; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Transport **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(glucose-transporting, GLUT1 (glucose transporter type 1); microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(growth arrest specific gene gas I, mouse; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(hepatic fibrinogen-angiopoietin related **protein** HARP-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(human PINCH **protein**-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Transport **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(hydrogen ion-sodium-exchanging, isoform 1; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(inhibitor of DNA binding 3 ID-3; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(insulin-like growth factor binding **protein**-2-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(integral membrane **protein** .alpha.-chain, MHC RT1-B1-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(laminin receptor 1 (lsmr1)/40-kDa ribosomal **protein** -encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(laminin receptor 1 (lsmr1)/40-kDa; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(latent transforming growth factor-.beta.-binding **protein** 4-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(lens epithelial **protein**-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(lens epithelial **protein**; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(ligand-binding, E1B 19K/Bcl 2 binding **protein** homolog; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(matrix Gla **protein**-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(membrane, integral, integral membrane **protein** .alpha.-chain MHC RT1-B1; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(mmyloid precursor-like **protein** mouse-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(mouse extracellular matrix **protein** 1-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(mouse protective **protein** for .beta.-galactosidase-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(osteonectins; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)

(peroxisomal farnsylated **protein**-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(peroxisomal farnsylated **protein**; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(**protein** kinase PIM-3-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** L10-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** L19-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** L23a-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** L32-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** L34-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** L37a-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** L44-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** L5-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** L7-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal

RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** L9-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** S15a-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** S18-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** S19-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** S23-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(ribosomal **protein** S23; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** S4-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** S8-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ribosomal **protein** S9-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(serum **albumin**-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Albumins**, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(serum; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Elongation factors (**protein** formation)
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(transcription elongation factor TFIIS; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene

expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(transmembrane, endoplasmic reticulum transmembrane **protein**; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ubiquinol-cytochrome c reductase hinge **protein**-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(ubiquitin and ribosomal **protein** S27a **fusion protein**-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Ribosomal **proteins**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(ubiquitin and ribosomal **protein** S27a **fusion protein**; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(urinary **protein** 2 precursor/ATPase inhibitor-encoding; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT **Proteins**, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(.beta.-transforming growth factor-binding, latent transforming growth factor-.beta.-binding **protein** 4; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT 9026-43-1, **Protein** kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(PIM-3; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT 161572-96-9, **Proteins** human
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(PINCH **protein** human; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT 9000-86-6 9001-46-1, Glutamate dehydrogenase 9001-52-9, Fructose-1,6-bis-phosphatase 9003-98-9, Deoxyribonuclease I 9004-02-8, Lipoprotein lipase 9012-78-6, Choline acetyltransferase 9014-34-0, Stearyl-CoA desaturase 9014-48-6, Transketolase 9024-60-6, Ornithine decarboxylase 9027-13-8, Enoyl-CoA hydratase 9028-12-0, Aldehyde reductase 9028-26-6, UDP-glucose dehydrogenase 9028-31-3, Aldose reductase 9028-40-4, 3-Hydroxyacyl-CoA-dehydrogenase 9028-48-2, NADP-dependent isocitrate dehydrogenase 9028-93-7, Inosine 5' monophosphate dehydrogenase 9029-97-4, 3-Ketoacyl CoA thiolase 9030-42-6 9037-14-3 9042-64-2, Aromatic L-Amino acid decarboxylase 9054-84-6, Xanthine dehydrogenase 9073-56-7, .alpha.-L-Iduronidase 11002-13-4, Angiotensinogen (**protein** renin substrate) 50812-36-7, Farnesyl pyrophosphate synthetase 60267-61-0D, Ubiquitin, **fusion protein** with ribosomal **protein** S27a 82869-38-3, 2,4-Dienoyl-CoA reductase 85637-73-6, Atrial natriuretic

peptide 106640-75-9, Aldo-keto reductase 114471-18-0, Brain natriuretic **peptide** 146702-87-6
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT 11104-54-4, Protective **protein**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(protective **protein** for .beta.-galactosidase; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

IT 9027-03-6, Ubiquinol-cytochrome c reductase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(ubiquinol-cytochrome c reductase hinge **protein**; microarray anal. of in vivo effects of hypophysectomy and growth hormone treatment on gene expression in rat)

REFERENCE COUNT: 92 THERE ARE 92 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:64027 HCAPLUS
DOCUMENT NUMBER: 134:110478
TITLE: **Chimeric polypeptides** of serum **albumin** containing **heterologous peptide sequences**, and therapeutic uses thereof
INVENTOR(S): Gyuris, Jeno; Lamphere, Lou
PATENT ASSIGNEE(S): GPC Biotech Inc., USA
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001005826	A2	20010125	WO 2000-US19689	20000719
WO 2001005826	A3	20010802		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-144534 P 19990719

AB The invention discloses **chimeric** polypeptides in which a serum albumin protein has been altered to include one or more biol. active **heterologous** peptide **sequences**. The **chimeric** polypeptides may exhibit therapeutic activity related to the **heterologous** peptide **sequences** coupled with the improved serum half-lives derived from the serum albumin protein fragments. **Heterologous** peptide **sequences** may be chosen to promote any biol. effect, including angiogenesis inhibition, antitumor activity, and induction of apoptosis. The therapeutic effect may be achieved by

direct administration of the **chimeric** polypeptide, or by transfecting cells with a vector including a nucleic acid encoding such a **chimeric** polypeptide.

IC ICM C07K014-00
CC 1-12 (Pharmacology)
Section cross-reference(s): 63
ST **chimeric albumin** therapeutic **peptide**; **angiogenesis inhibition chimeric albumin** therapeutic **peptide**; antitumor apoptosis **chimeric albumin** therapeutic **peptide**
IT Receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(MIRR; **chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT Bone marrow
Liver
Skin
(cell, transfected; **chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT Angiogenesis
Angiogenesis inhibitors
Apoptosis
Cell death
Cell differentiation
Cell proliferation
Drug delivery systems
Genetic vectors
Retroviral vectors
Virus vectors
(**chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT **Peptides**, biological studies
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)

(**chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT **Fusion proteins** (**chimeric proteins**)
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT RGD **peptides**
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(**chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT Cytokine receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(**chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT G **protein**-coupled receptors

RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(**chimeric polypeptides** of serum **albumin**
contg. **heterologous peptide sequences**,
and therapeutic uses thereof)

IT Ion channel
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(**chimeric polypeptides** of serum **albumin**
contg. **heterologous peptide sequences**,
and therapeutic uses thereof)

IT Orphan receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(**chimeric polypeptides** of serum **albumin**
contg. **heterologous peptide sequences**,
and therapeutic uses thereof)

IT Receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(**chimeric polypeptides** of serum **albumin**
contg. **heterologous peptide sequences**,
and therapeutic uses thereof)

IT Tyrosine kinase receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(**chimeric polypeptides** of serum **albumin**
contg. **heterologous peptide sequences**,
and therapeutic uses thereof)

IT Nucleic acids
RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**chimeric polypeptides** of serum **albumin**
contg. **heterologous peptide sequences**,
and therapeutic uses thereof)

IT Capillary vessel
(endothelium; **chimeric polypeptides** of serum
albumin contg. **heterologous peptide**
sequences, and therapeutic uses thereof)

IT **Proteins**, specific or class
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gene myc, myc epitope **peptide; chimeric**
polypeptides of serum **albumin** contg.
heterologous peptide sequences, and
therapeutic uses thereof)

IT Pharmacokinetics
(half-life; **chimeric polypeptides** of serum
albumin contg. **heterologous peptide**
sequences, and therapeutic uses thereof)

IT Cell differentiation
(inducers; **chimeric polypeptides** of serum
albumin contg. **heterologous peptide**
sequences, and therapeutic uses thereof)

IT Cell proliferation
(inhibitors; **chimeric polypeptides** of serum
albumin contg. **heterologous peptide**
sequences, and therapeutic uses thereof)

IT Conformation
(loop, **protein; chimeric polypeptides** of
serum **albumin** contg. **heterologous peptide**
sequences, and therapeutic uses thereof)

IT Tertiary structure
(**protein; chimeric polypeptides** of serum
albumin contg. **heterologous peptide**
sequences, and therapeutic uses thereof)

IT Gland
(secretory gland cell, transfected; **chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT **Albumins**, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(serum; **chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT Muscle
(skeletal muscle cell, transfected; **chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT Cell
(stem, transfected; **chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT Blood cell
Hematopoietic precursor cell
(transfected; **chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT Adeno-associated virus
Adenoviridae
Human herpesvirus
Human immunodeficiency virus
Vaccinia virus
(vector; **chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT **86090-08-6D, Angiostatin**, fragments **187888-07-9D, Endostatin**, fragments
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(**chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)
IT 145646-22-6 320593-10-0, Vrgdf **peptide+**
RL: BOC (Biological occurrence); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(**chimeric polypeptides** of serum **albumin** contg. **heterologous peptide sequences**, and therapeutic uses thereof)

L21 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:39598 HCAPLUS
DOCUMENT NUMBER: 136:96035
TITLE: Retroinverso **polypeptides** that mimic or inhibit thrombospondin activity
INVENTOR(S): Williams, Taffy; Tuszynski, George; Actor, Paul
PATENT ASSIGNEE(S): Inkine Pharmaceutical Company, Inc., USA
SOURCE: U.S., 53 pp.

CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6339062	B1	20020115	US 1998-197770	19981123

AB The present invention relates generally to polypeptides that mimic or inhibit the biol. activity of thrombospondin, and particularly to polypeptides in retroinverso form. These polypeptides may be used for their biol. and pharmaceutical applications such as: (a) inhibiting the invasive and metastatic activity of melanoma cells, (b) promoting and inhibiting cellular attachment to tissue culture flacks, (c) promoting wound healing, angiogenesis, and implant acceptance, (d) agents for anti-platelet aggregation, (e) agents for antimalarial activity, and (f) diagnostic reagents in different therapeutic applications, as well as other related areas.

IC ICM A61K038-00
NCL 514015000
CC 1-6 (Pharmacology)
Section cross-reference(s): 34
ST retroinverso **polypeptide** thrombospondin mimetic metastasis inhibition
IT Antitumor agents
(anti-invasive agents; retroinverso **polypeptides** that mimic or inhibit thrombospondin activity for pharmaceutical applications such as metastasis inhibition)
IT Cytotoxic agents
(conjugates with retroinverso **polypeptides**; retroinverso **polypeptides** that mimic or inhibit thrombospondin activity for pharmaceutical applications such as metastasis inhibition)
IT Abrins
Radionuclides
Ricins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates with retroinverso **polypeptides**; retroinverso **polypeptides** that mimic or inhibit thrombospondin activity for pharmaceutical applications such as metastasis inhibition)
IT Toxins
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(diphtheria, conjugates with retroinverso **polypeptides**; retroinverso **polypeptides** that mimic or inhibit thrombospondin activity for pharmaceutical applications such as metastasis inhibition)
IT Antitumor agents
(metastasis; retroinverso **polypeptides** that mimic or inhibit thrombospondin activity for pharmaceutical applications such as metastasis inhibition)
IT Protamines
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(purothionins, conjugates with retroinverso **polypeptides**; retroinverso **polypeptides** that mimic or inhibit thrombospondin activity for pharmaceutical applications such as metastasis inhibition)
IT **Angiogenesis inhibitors**

Cell adhesion
Human
Platelet aggregation inhibitors
(retroinverso **polypeptides** that mimic or **inhibit** thrombospondin activity for pharmaceutical applications such as metastasis **inhibition**)

IT Thrombospondins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(retroinverso **polypeptides** that mimic or inhibit thrombospondin activity for pharmaceutical applications such as metastasis inhibition)

IT **Peptides**, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(retroinverso; retroinverso **polypeptides** that mimic or inhibit thrombospondin activity for pharmaceutical applications such as metastasis inhibition)

IT **Albumins**, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(serum, conjugates with retroinverso **polypeptides**; retroinverso **polypeptides** that mimic or inhibit thrombospondin activity for pharmaceutical applications such as metastasis inhibition)

IT 146480-36-6, Matrix metalloproteinase-9
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(prodn.; retroinverso **polypeptides** that mimic or inhibit thrombospondin activity for pharmaceutical applications such as metastasis inhibition)

IT 129598-58-9P 137757-88-1P 138849-24-8P 138849-26-0P 341970-05-6P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(retroinverso **polypeptides** that mimic or inhibit thrombospondin activity for pharmaceutical applications such as metastasis inhibition)

IT 59-05-2D, Methotrexate, conjugates with retroinverso **polypeptides**
305-03-3D, Chlorambucil, conjugates with retroinverso **polypeptides**
2067-58-5D, Phenylenediamine mustard, conjugates with retroinverso **polypeptides** 9004-54-0D, Dextran, conjugates with retroinverso **polypeptides** 11056-06-7D, Bleomycin, conjugates with retroinverso **polypeptides** 20830-81-3D, Daunomycin, conjugates with retroinverso **polypeptides** 23109-05-9D, .alpha.-Amanitin, conjugates with retroinverso **polypeptides** 23214-92-8D, Doxorubicin, conjugates with retroinverso **polypeptides** 24991-23-9D, conjugates with retroinverso **polypeptides** 25316-40-9D, Adriamycin, conjugates with retroinverso **polypeptides** 25513-46-6D, Poly-L-glutamic acid, conjugates with retroinverso **polypeptides** 53643-48-4D, Vindesine, conjugates with retroinverso **polypeptides** 137757-87-0 138849-25-9 138849-27-1 142871-13-4 341970-08-9 388603-19-8 388603-20-1D, sulfhydryl derivs.
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(retroinverso **polypeptides** that mimic or inhibit thrombospondin activity for pharmaceutical applications such as metastasis inhibition)

REFERENCE COUNT: 103 THERE ARE 103 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:731180 HCAPLUS
DOCUMENT NUMBER: 135:287519
TITLE: Antigen-specific immune complex-based enzyme-linked immunosorbent assay
INVENTOR(S): Racis, Stanley Paul
PATENT ASSIGNEE(S): Diagen Corporation, USA
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001073437	A2	20011004	WO 2001-US9344	20010323
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2001051351	A1	20011213	US 2001-816271	20010323

PRIORITY APPLN. INFO.: US 2000-192472 P 20000327

AB The invention is in the field of immunol. serol. in vitro diagnostics. The invention is an ELISA-based diagnostic testing system and method that provides the capability to "look within" and measure an immune complexes specific antigen and antibody using typical ELISA microplates and procedures. One aspect of the invention is a method for detecting antigen and antibody in immune complexes. A second aspect of the invention is for a well design that may be used in the method of the invention. A third aspect of the invention is for a kit for detecting antigen, antibody, or both antigen and antibody in immune complexes.

IC ICM G01N033-543
ICS G01N033-564; G01N033-58; G01N033-68; G01N033-574; B01L003-00
CC 15-2 (Immunochemistry)
Section cross-reference(s): 9, 14
IT **Proteins**, specific or class
RL: ARU (Analytical role, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(A, capture agent; antigen-specific immune complex-based ELISA)
IT **Proteins**, specific or class
RL: ANT (Analyte); ARG (Analytical reagent use); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(AMF; antigen-specific immune complex-based ELISA)
IT **Proteins**, specific or class
RL: ANT (Analyte); ARG (Analytical reagent use); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(C-reactive; antigen-specific immune complex-based ELISA)
IT **Proteins**, specific or class
RL: ARU (Analytical role, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(G, capture agent; antigen-specific immune complex-based ELISA)

IT Heat-shock **proteins**
RL: ANT (Analyte); ARG (Analytical reagent use); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(HSP 65; antigen-specific immune complex-based ELISA)
IT **Proteins**, specific or class
RL: ANT (Analyte); ARG (Analytical reagent use); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(PS2; antigen-specific immune complex-based ELISA)
IT **Proteins**, specific or class
RL: ARU (Analytical role, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(Staphylococcal; antigen-specific immune complex-based ELISA)
IT Angiogenic factors
Antigens
Blood-coagulation factors
Carcinoembryonic antigen
Cyclins
DNA
Growth factors, animal
Heat-shock **proteins**
Laminins
Receptors
Rheumatoid factors
Transcription factors
neu (receptor)
p53 (**protein**)
RL: ANT (Analyte); ARG (Analytical reagent use); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(antigen-specific immune complex-based ELISA)
IT **Albumins**, biological studies
RL: ARU (Analytical role, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(serum, bovine; antigen-specific immune complex-based ELISA)
IT 9025-26-7, Cathepsin D **86090-08-6, Angiostatin**
127464-60-2, Vascular endothelial growth factor **187888-07-9, Endostatin**
RL: ANT (Analyte); ARG (Analytical reagent use); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(antigen-specific immune complex-based ELISA)

L21 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:472523 HCAPLUS
DOCUMENT NUMBER: 135:66255
TITLE: Liquid composition of a biodegradable block copolymer for drug delivery system
INVENTOR(S): Seo, Min-hyo; Choi, In-ja
PATENT ASSIGNEE(S): Samyang Corp., S. Korea
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2001045742 A1 20010628 WO 2000-KR1508 20001221
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: KR 1999-60349 A 19991222

AB The present invention relates to a liq. polymeric compn. capable of forming a physiol. active substance-contg. implant when it is injected into a living body and a method of prepn. The compn. comprises a water-sol. biocompatible liq. polyethylene glycol deriv., a biodegradable block copolymer which is insol. in water but sol. in the water-sol. biocompatible liq. polyethylene glycol deriv. and a physiol. active substance. Thus, a triblock copolymer was prepd. from lactide-1,4-dioxanone and PEG. Piroxicam 150, the above biodegradable block copolymer 400, diacetyl polyethylene glycol 420, and gelatin 30 mg were dissolved in a 50% aq. HOAc soln. and the drug-contg. liq. polymeric compn. was filtered and the org. solvent was removed.

IC ICM A61K047-30
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 37

IT **Albumins**, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(liq. compn. of biodegradable block copolymer for drug delivery system)

IT Bone morphogenetic **proteins**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(liq. compn. of biodegradable block copolymer for drug delivery system)

IT **Peptides**, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(liq. compn. of biodegradable block copolymer for drug delivery system)

IT **Proteins**, general, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(liq. compn. of biodegradable block copolymer for drug delivery system)

IT 50-70-4, Sorbitol, biological studies 50-76-0, Actinomycin-D 50-78-2, Aspirin 50-99-7, Glucose, biological studies 51-21-8, 5-Fluorouracil 53-86-1, Indomethacin 57-48-7, Fructose, biological studies 57-50-1, Sucrose, biological studies 59-01-8, Kanamycin 59-05-2, Methotrexate 59-23-4, Galactose, biological studies 60-54-8, Tetracycline 63-42-3, Lactose 69-53-4, Ampicillin 69-65-8, Mannitol 87-79-6, Sorbose 87-99-0, Xylitol 99-20-7, Trehalose 103-90-2, Acetaminophen 114-07-8, Erythromycin 151-21-3, Sodium dodecylsulfate, biological studies 471-34-1, Calcium carbonate, biological studies 557-34-6, Zinc acetate 564-25-0, Doxycycline 1066-17-7, Colistin 1309-42-8, Magnesium hydroxide 1314-13-2, Zinc oxide, biological studies 1403-66-3, Gentamycin 1404-00-8, Mitomycin 1404-04-2, Neomycin 1404-90-6, Vancomycin 1405-87-4, Bacitracin 1406-05-9, Penicillin 1407-47-2, Angiotensin 3486-35-9, Zinc carbonate 5104-49-4, Flurbiprofen 6990-06-3, Fusidic acid 7446-70-0, Aluminum chloride, biological studies 7542-37-2, Paromomycin 7646-85-7, Zinc chloride, biological studies 7647-14-5, Sodium chloride, biological studies 7786-30-3, Magnesium chloride, biological studies 9001-63-2, Lysozyme 9002-72-6, Somatotropin 9003-39-8, Polyvinylpyrrolidone 9004-10-8, Insulin, biological studies 9004-32-4, Sodium carboxymethyl cellulose 9004-54-0, Dextran, biological studies 9004-61-9, Hyaluronic acid 9007-12-9, Calcitonin 9007-92-5, Glucagon, biological studies 9012-76-4, Chitosan 9034-39-3, Growth hormone releasing factor

9034-40-6, LHRH 9061-61-4, Nerve growth factor 10043-52-4, Calcium chloride, biological studies 10118-90-8, Minocycline 11056-06-7, Bleomycin 11096-26-7, Erythropoietin 11111-12-9, Cephalosporin 12619-70-4, Cyclodextrin 13614-98-7, Minocycline hydrochloride 15307-79-6, Diclofenac sodium 15307-86-5, Diclofenac 15663-27-1, Cisplatin 15687-27-1, Ibuprofen 16039-53-5, Zinc lactate 20830-81-3, Daunorubicin 21645-51-2, Aluminum hydroxide, biological studies 22071-15-4, Ketoprofen 22204-53-1, Naproxen 23155-02-4, Phosphomycin 23214-92-8, Doxorubicin 24305-27-9, Thyrotropin releasing hormone 25316-40-9, Adriamycin 25322-68-3D, alkyl ethers 25496-72-4, Glyceryl monooleate 29679-58-1, Fenoprofen 31566-31-1, Glyceryl monostearate 32986-56-4, Tobramycin 33069-62-4, Paclitaxel 34493-98-6, Dibekacin 36322-90-4, Piroxicam 37517-28-5, Amikacin 40828-46-4, Suprofen 41575-94-4, Carboplatin 51110-01-1, Somatostatin 52093-21-7, Micronomicin 53994-73-3, Cephaclor 58957-92-9, Idarubicin 59804-37-4, Tenoxicam 59995-64-1, Thienamycin 60118-07-2, Endorphin 62229-50-9, EGF 63527-52-6 64221-86-9, Imipenem 68767-14-6, Loxoprofen 74011-58-8, Enoxacin 81627-83-0, M-CSF 82419-36-1, Ofloxacin 85721-33-1, Ciprofloxacin **86090-08-6**, **Angiostatin** 100986-85-4, Levofloxacin 106392-12-5, Poloxamer 114977-28-5, Taxotere 126467-48-9, Porcine growth hormone 143011-72-7, GCSF **187888-07-9**, **Endostatin**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(liq. compn. of biodegradable block copolymer for drug delivery system)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:315685 HCAPLUS
DOCUMENT NUMBER: 134:348950
TITLE: Expression vector for human serum **albumin** gene expression and its use in gene of hypoalbuminaemia
INVENTOR(S): Wood, Christopher Barry
PATENT ASSIGNEE(S): UK
SOURCE: Brit. UK Pat. Appl., 25 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2350362	A1	20001129	GB 1999-30891	19990805

PRIORITY APPLN. INFO.: GB 1998-17084 A 19980806
AB This invention provides a vector construction comprising human serum albumin gene which is used as gene therapy to treat the disorder of liver, like hypoalbuminemia. The plasmid vector pGT123 comprises myosin light chain 1/3 enhancer, CMV promoter and human serum albumin gene. The invention also provides the pharmaceutical compn. of the gene therapy and examples of administration. Plasmid vector comprising human serum albumin gene was introduce into patient suffering the liver disorder which resulted in dramatic increase of the concn. of serum albumin in blood.
IC ICM C12N015-14
ICS A61P001-16; C12N015-85
CC 3-2 (Biochemical Genetics)
Section cross-reference(s): 1, 14
ST plasmid vector pGT123 human serum **albumin**; gene therapy disorder liver hypoalbuminemia

IT Hepatitis
(C, gene therapy of; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)
IT Promoter (genetic element)
RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(Rous Sarcoma Virus, expression of human serum **albumin** gene from; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)
IT Infection
(bacterial, gene therapy of; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)
IT Blood coagulation
(disorder, gene therapy of; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)
IT Promoter (genetic element)
RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(early, of SV40, expression of human serum **albumin** gene from; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)
IT Human immunodeficiency virus
(envelop gene of, in gene therapy of liver disease; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)
IT Gene, microbial
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(envelop gene, in gene therapy of liver disease; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)
IT Liver, disease
(failure, gene therapy of; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)
IT Blood-coagulation-factors
CA 125 (carbohydrate antigen)
CA19-9 antigen
Carcinoembryonic antigen
Interferons
Prostate-specific antigen
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene for, in gene therapy of liver disease; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)
IT Thrombospondins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene therapy comprises; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)
IT Mammal (Mammalia)
(gene therapy of liver disorders of; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)
IT Anemia (disease)

Cirrhosis
Hepatitis
(gene therapy of; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Antigens
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hepatitis B core, gene for, in gene therapy of liver disease; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Antigens
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hepatitis C core, gene for, in gene therapy of liver disease; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Liver, neoplasm
(hepatoma, gene therapy of; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Lipoproteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(high-d., gene for, in gene therapy of liver disease; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT **Albumins**, biological studies
RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(hypoalbuminemia, gene therapy of; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Promoter (genetic element)
RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(immediate early, cytomegalovirus, in pGT123, expression of human serum **albumin** gene from; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Drug delivery systems
(injections, i.m., for administration; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Promoter (genetic element)
RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(late, of SV40, expression of human serum **albumin** gene from; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Lipoproteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(low-d., gene for, in gene therapy of liver disease; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Promoter (genetic element)
RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(major intermediate-early, expression of human serum **albumin** gene from; vector construction for human serum **albumin**

expression and use in gene therapy to treat hypoalbuminemia)

IT Enhancer (genetic element)
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(myosin light chain 1/3, in upstream of HSB gene in pGT123; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Gene therapy
(of liver disorders; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Genetic vectors
(pGT123, human serum **albumin** gene expression vector; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Liver, neoplasm
(primary and secondary, gene therapy of; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT **Albumins**, biological studies
RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(serum, human, expression vector for; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Platelet (blood)
(thrombocytopenia, gene therapy of; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Lipoproteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(very-low-d., gene for, in gene therapy of liver disease; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT Infection
(viral, gene therapy of; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT 1407-47-2, Angiotensin
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antisense gene for, in gene therapy; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT 125978-95-2, Nitric oxide synthetase
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(endothelial, gene for, in gene therapy of liver disease; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT 9002-06-6, Thymidine kinase
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene for, as selectable marker; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT 9001-25-6, Blood coagulation factor VII 9001-26-7, Blood coagulation factor II 9001-28-9, Blood coagulation factor IX 9004-10-8, Insulin, biological studies 9013-55-2, Blood coagulation factor XI 9014-42-0, Thrombopoietin 11096-26-7, Erythropoietin 60118-07-2, Endorphin 62031-54-3, Fibroblast growth factor 81627-83-0, MCSF 83869-56-1,

GMCSF **86090-08-6, Angiostatin** 127464-60-2, Vascular endothelial growth factor 143011-72-7, GCSF **187888-07-9, Endostatin**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene for, in gene therapy of liver disease; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT 339164-74-8, DNA (plasmid pGT123)
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleotide sequence; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT 11056-06-7, Bleomycin
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(resistance to, as selectable marker; vector construction for human serum **albumin** expression and use in gene therapy to treat hypoalbuminemia)

IT 80700-94-3 337995-35-4
RL: PRP (Properties)
(unclaimed **protein**; expression vector for human serum **albumin** gene expression and its use in gene of hypoalbuminemia)

L21 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:456758 HCAPLUS
DOCUMENT NUMBER: 133:85121
TITLE: An artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in a solubilized form and with correct conformation in bacterial hosts
INVENTOR(S): Sogo, Kazuyo; Yanagi, Hideki; Yura, Takashi
PATENT ASSIGNEE(S): HSP Research Institute, Inc., Japan
SOURCE: Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1016724	A2	20000705	EP 1999-126094	19991228
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000189163	A2	20000711	JP 1998-372965	19981228
US 6197547	B1	20010306	US 1999-472971	19991228

PRIORITY APPLN. INFO.: JP 1998-372965 A 19981228

AB An artificial operon contg. the genes for the chaperonins GroEL and GroES under control of a strong inducible promoter is described for use manufg. foreign proteins in a solubilized form and with correct conformation by preventing inclusion body formation in Escherichia coli or other bacterial hosts. Co-expression of genes for murine endostatin or human ORP150 and an operon contg. the genes GroEL and GroES (or the DnaK and DnaJ genes, as the pos. control) led to most of the exogenous proteins remaining sol. The exogenous proteins accumulated in inclusion bodies in cells lacking the artificial operon.

IC ICM C12N015-70
ICS C07K014-195; C12N009-90; C12N015-31; C12N015-61

CC 3-2 (Biochemical Genetics)

Section cross-reference(s): 10, 16
ST chaperonin artificial operon exogenous **protein** solubilization Escherichia; GroEL GroES artificial operon **protein** solubilization
IT Allergens
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(Allergens, Cry j II (Cryptomeria japonica, II), manuf. in Escherichia coli of; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)
IT Chaperonins
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); BIOL (Biological study); PREP (Preparation); USES (Uses)
(DnaJ; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)
IT Chaperonins
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); BIOL (Biological study); PREP (Preparation); USES (Uses)
(DnaK; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)
IT Chaperonins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(GroEL; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)
IT Chaperonins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(GroES; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)
IT **Proteins**, specific or class
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(ORP150 (oxygen-regulated **protein**, 150,000-mol.-wt.), manuf. in escherichia coli of; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)
IT Promoter (genetic element)
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Pzt-1, expression of chaperonin operon using; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)
IT Cedar
(allergens of; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)
IT Promoter (genetic element)
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(araB, expression of chaperonin operon using; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)
IT Allergens
Blood-coagulation factors
Bone morphogenetic **proteins**
Ciliary neurotrophic factor
Complement
Hepatocyte growth factor
Immunoglobulins
Interferons

Interleukin 1 receptor antagonist
Interleukin receptors
Interleukins
Leukemia inhibitory factor
Neurotrophic factors
Platelet-derived growth factors
Stem cell factor
Transcription factors
Transforming growth factors
Transforming **proteins**
Tumor necrosis factors
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Chaperonins
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); BIOL (Biological study); PREP (Preparation); USES (Uses)
(artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Operon
(artificial; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Neurotrophic factors
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(brain-derived; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Inclusion bodies
(chaperones for prevention of formation of; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(clpPX, inactivation in expression host of; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Escherichia coli
(expression host; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Neurotrophic factors
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(glial-derived; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Gene, microbial
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(groEL, in artificial operon; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Gene, microbial
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(groES, in artificial operon; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Gene, microbial
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(grpE, in artificial operon; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(hslV/U, inactivation in expression host of; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Promoter (genetic element)
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(lac operon, expression of chaperonin operon using; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Annexins
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(lipocortins; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(lon, inactivation in expression host of; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Molecular association
(of **proteins**, chaperones for prevention of; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(plsX, inactivation in expression host of; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Fermentation
(**protein**, prevention of inclusion bodies in; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Gene, microbial
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(rpoH, inactivation in expression host of; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT **Albumins**, preparation
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(serum; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Antibodies
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(single chain; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Plasmid vectors
(synthetic chaperonin operon expression vector; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT Promoter (genetic element)
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(trp operon, expression of chaperonin operon using; artificial operon

encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT 9001-63-2P, Lysozyme 9002-72-6P, Growth hormone 9014-42-0P, Thrombopoietin 9015-94-5P, Renin, preparation 9026-43-1P, **Protein** kinase 9035-51-2P, Cytochrome P 450, preparation 9035-68-1P, Proinsulin 9035-81-8P, Trypsin inhibitor 9054-89-1P, Superoxide dismutase 9059-50-1P, Prochymosin 9061-61-4P, Nerve growth factor 11096-26-7P, Erythropoietin 37228-64-1P, Glucocerebrosidase 60202-16-6P, **Protein** C 61912-98-9P, Insulin-like growth factor 62031-54-3P, Fibroblast growth factor 81627-83-0P, M-CSF 83869-56-1P, GM-CSF 139639-23-9P, Tissue plasminogen activator 143011-72-7P, G-CSF **187888-07-9P, Endostatin**
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT 9004-06-2P, Elastase
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(inhibitors of; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT 82657-92-9P, Prourokinase
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(manuf. in Escherichia coli of; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in bacterial hosts)

IT 117536-73-9, DNA (Escherichia coli clone H18 gene groES) 117536-75-1, DNA (Escherichia coli gene groEL) 281237-81-8, 2: PN: EP1016724 SEQID: 2 unclaimed DNA 281237-82-9, 7: PN: EP1016724 SEQID: 7 unclaimed DNA
RL: PRP (Properties)
(unclaimed nucleotide sequence; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in a solubilized form and with correct conformation in bacterial hosts)

IT 115681-99-7, **Protein** (Escherichia coli gene groES) 117537-95-8 259125-10-5, Trigger factor (Escherichia coli)
RL: PRP (Properties)
(unclaimed **protein** sequence; artificial operon encoding chaperonin GroEL and GroES and its use in manufg. foreign **proteins** in a solubilized form and with correct conformation in bacterial hosts)

L21 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:325817 HCAPLUS
DOCUMENT NUMBER: 130:351218
TITLE: Methods and compositions for enhancing immune response and for the production of in vitro MABs
INVENTOR(S): Tamarkin, Lawrence; Paciotti, Giulio F.
PATENT ASSIGNEE(S): Cytimmune Sciences, Inc., USA
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9924066	A2	19990520	WO 1998-US23957	19981110
WO 9924066	A3	19991209		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9914548	A1	19990531	AU 1999-14548	19981110
EP 1039933	A2	20001004	EP 1998-958518	19981110
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002503639	T2	20020205	JP 2000-520153	19981110

PRIORITY APPLN. INFO.:

US 1997-65155	P	19971110
US 1998-75811	P	19980224
US 1998-107455	P	19981106
WO 1998-US23957	W	19981110

AB The methods and compns. of the present invention are directed to enhancing an immune response and increasing vaccine efficacy through the simultaneous or sequential targeting of specific immune system components. More particularly, specific immune components, such as macrophages, dendritic cells, B cells and T cells, are individually activated by component-specific immunostimulating agents. One such component-specific immunostimulating agent is an antigen-specific, species-specific monoclonal antibody. The invention is also directed to a method for the in vitro prodn. of the antigen-specific, species-specific monoclonal antibodies which relies upon the in vitro conversion of blood-borne immune cells, such as macrophages and lymphocytes. Vaccine efficacy is enhanced by the administration of compns. contg. component-specific immunostimulating agents and other elements, such as antigens or carrier particles, such as colloidal methods, such as gold.

IC ICM A61K039-00
CC 15-2 (Immunochemistry)
Section cross-reference(s): 63

IT Serum **albumin**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(human; methods and compns. for enhancing immune response and for the prodn. of in vitro monoclonal antibodies)

IT Antisense DNA
DNA
Nucleotides, biological studies
Proteins (specific **proteins** and subclasses)
RNA
mRNA
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immunoregulatory; methods and compns. for enhancing immune response and for the prodn. of in vitro monoclonal antibodies)

IT Angiogenic factors
Antigens
Blood groups
CD40 (antigen)
CD40 ligand
CD80 (antigen)
Endotoxins
Heat-shock **proteins**
Interferon .alpha./.beta.
Interferon .gamma.
Interleukin 1
Interleukin 10
Interleukin 11

Interleukin 12
Interleukin 13
Interleukin 1.beta.
Interleukin 2
Interleukin 3
Interleukin 4
Interleukin 5
Interleukin 6
Interleukin 7
Interleukin 8
Lipid A
Lymphotoxin
Macrophage migration inhibitory factor
Phospholipids, biological studies
Polyoxyalkylenes, biological studies
Rh blood groups
Staphylococcal enterotoxin B
Toxins
Transforming growth factor .alpha.
Transforming growth factors .beta.
Tumor necrosis factor .alpha.
Tumor necrosis factors
Tumor-associated antigen
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods and compns. for enhancing immune response and for the prodn. of in vitro monoclonal antibodies)

IT Immunomodulators
Inflammation
(**proteins**; methods and compns. for enhancing immune response and for the prodn. of in vitro monoclonal antibodies)

IT 7440-57-5D, Gold, colloids 9001-84-7, Phospholipase A2 9004-95-9, Brij 58 25322-68-3 30516-87-1, AZT 62031-54-3, Fibroblast growth factor 62229-50-9, Epidermal growth factor 81627-83-0, M-CSF 83869-56-1, GM-CSF **86090-08-6**, **Angiostatin** 106096-93-9, Basic fibroblast growth factor 127464-60-2, Vascular endothelial growth factor 143011-72-7, G-CSF **187888-07-9**, **Endostatin**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods and compns. for enhancing immune response and for the prodn. of in vitro monoclonal antibodies)

L21 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:126800 HCAPLUS
DOCUMENT NUMBER: 130:178347
TITLE: Transformation of duckweed (Lemna) plants with ballistic bombardment, electroporation, or Agrobacterium vectors
INVENTOR(S): Stomp, Anne-Marie; Rajbhandari, Nirmala
PATENT ASSIGNEE(S): North Carolina State University, USA
SOURCE: PCT Int. Appl., 106 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9907210	A1	19990218	WO 1998-US16683	19980811

W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, HR, HU,

ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9887799	A1	19990301	AU 1998-87799	19980811
US 6040498	A	20000321	US 1998-132536	19980811
EP 1037523	A1	20000927	EP 1998-939350	19980811
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001513325	T2	20010904	JP 2000-506820	19980811

PRIORITY APPLN. INFO.: US 1997-55474 P 19970812
WO 1998-US16683 W 19980811

AB Methods and compns. are provided for the efficient transformation of duckweed by either ballistic bombardment, electroporation, or Agrobacterium. In this manner, any gene or nucleic acid of interest can be introduced and expressed in duckweed plants. Transformed duckweed plants, cells, tissues are also provided. Transformed duckweed plant tissue culture and methods of producing recombinant proteins and peptides from transformed duckweed plants are also disclosed.

IC ICM A01H004-00
ICS C12N005-04; C12N005-14; C12N015-82; C12N015-84

CC 3-2 (Biochemical Genetics)
Section cross-reference(s): 11

IT Collagens, preparation
Enzymes, preparation
Hemoglobins
Interferon .alpha.
Monoclonal antibodies
Rb **protein**
Serum **albumin**
p53 (**protein**)
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(cloning in duckweed; transformation of duckweed (Lemna) plants with ballistic bombardment, electroporation, or Agrobacterium vectors)

IT 9002-72-6P, Growth hormone 9004-10-8P, Insulin, preparation
9075-42-7P, Cytochrome P450 oxidase 37228-64-1P, .beta.-Glucocerebrosidase **86090-08-6P, Angiostatin**
169494-85-3P, Leptin
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(cloning in duckweed; transformation of duckweed (Lemna) plants with ballistic bombardment, electroporation, or Agrobacterium vectors)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:9734 HCAPLUS
DOCUMENT NUMBER: 130:86207
TITLE: Polycarbonate-polyurethane dispersions for thrombo-resistant coatings
INVENTOR(S): Zhong, Sheng Ping
PATENT ASSIGNEE(S): Boston Scientific Corporation, USA
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9857671	A2	19981223	WO 1998-US12564	19980617
WO 9857671	A3	19990415		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

EP 1011739	A2	20000628	EP 1998-930305	19980617
R: DE, FR, GB, NL, IE				
JP 2000513988	T2	20001024	JP 1999-504713	19980617

PRIORITY APPLN. INFO.: US 1997-877987 A 19970618
WO 1998-US12564 W 19980617

AB A medical device is described which has on a surface thereof a biocompatible coating. This biocompatible coating is formed from a compn. which includes an aq. emulsion or dispersion of a polycarbonate-polyurethane compn. contg. one or more internal emulsifying agents. A stent was dipped into an aq. dispersion contg. NeoRez R985 250 mL, water 250 mL, and 0.5 % Fluorad FC-129 stock soln. 10 mL, and 34 % NH4OH 4 mL, then withdrawn, and dried. The coated stent exhibited superior thrombo-resistance when placed within the body.

IC ICM A61L
CC 63-7 (Pharmaceuticals)
IT **Albumins**, biological studies
Alloys, biological studies
Collagens, biological studies
Elastins
Fluoropolymers, biological studies
Gelatins, biological studies
Glass, biological studies
Metals, biological studies
Natural rubber, biological studies
Peptides, biological studies
Polyamides, biological studies
Polyanhydrides
Polycarbonates, biological studies
Polyesters, biological studies
Polyolefins
Polyureas
Polyurethanes, biological studies
Silicone rubber, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(medical device made of; polycarbonate-polyurethane dispersions for thrombo-resistant coatings on medical devices)
IT 56-75-7, Chloramphenicol 60-54-8, Tetracycline 114-07-8, Erythromycin 1404-90-6, Vancomycin 1406-05-9, Penicillin 1406-11-7, Polymyxin 8001-27-2, Hirudin 9002-01-1, Streptokinase 9002-72-6, Growth hormone 9004-61-9, Hyaluronic acid 9005-49-6, Heparin, biological studies 9007-28-7, Chondroitin sulfate 9039-53-6, Urokinase 9050-30-0, Heparan sulfate 9056-36-4, Keratan sulfate 11111-12-9, Cephalosporin 18323-44-9, Clindamycin 21085-65-4, Lincomycins 24967-94-0, Dermatan sulfate **86090-08-6, Angiostatin 187888-07-9,**

Endostatin
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as bioactive agent in coating; polycarbonate-polyurethane dispersions for thrombo-resistant coatings on medical devices)

L21 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:766507 HCAPLUS
DOCUMENT NUMBER: 130:29221
TITLE: Preparation of solid porous matrixes for pharmaceutical uses
INVENTOR(S): Unger, Evan C.
PATENT ASSIGNEE(S): Imarx Pharmaceutical Corp., USA
SOURCE: PCT Int. Appl., 139 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9851282	A1	19981119	WO 1998-US9570	19980512
W: AU, BR, CA, CN, JP, KR, NZ				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9873787	A1	19981208	AU 1998-73787	19980512
EP 983060	A1	20000308	EP 1998-921109	19980512
R: DE, FR, GB, IT, NL				
US 2001018072	A1	20010830	US 2001-828762	20010409

PRIORITY APPLN. INFO.: US 1997-46379 P 19970513
US 1998-75477 A 19980511
WO 1998-US9570 W 19980512

AB A solid porous matrix formed from a surfactant, a solvent, and a bioactive agent is described. Thus, amphotericin nanoparticles were prepd. by using ZrO2 beads and a surfactant. The mixt. was milled for 24 h.
IC ICM A61K009-10
CC 63-6 (Pharmaceuticals)
IT **Albumins**, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of solid porous matrixes for pharmaceutical uses)
IT **Peptides**, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of solid porous matrixes for pharmaceutical uses)
IT **Proteins** (general), biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of solid porous matrixes for pharmaceutical uses)
IT 646-04-8, trans-2-Pentene 661-54-1, Propyne-3,3,3-trifluoro 661-97-2 677-56-5, Propane-1,1,1,2,2,3-hexafluoro 678-26-2, Perfluoropentane 684-16-2, Hexafluoroacetone 685-63-2, Hexafluoro-1,3-butadiene 689-97-4, Vinyl acetylene 692-50-2, Hexafluoro-2-butyne 752-61-4, Digitalin 768-94-5, Amantadine 818-92-8, 3-FluoroPropylene 846-50-4, Temazepam 921-13-1, Chlorodinitromethane 927-84-4, Trifluoromethyl peroxide 928-45-0, Butyl nitrate 968-93-4, Testolactone 987-24-6, Betamethasone acetate 990-73-8, Fentanyl citrate 1070-11-7, Ethambutol hydrochloride 1119-94-4, Lauryltrimethylammonium bromide 1119-97-7, Myristyltrimethylammonium bromide 1172-18-5 1177-87-3, Dexamethasone acetate 1191-96-4, EthylCyclopropane 1306-06-5, Hydroxylapatite 1397-89-3, Amphotericin B 1400-61-9, Nystatin 1404-04-2, Neomycin 1405-37-4, Capreomycin sulfate 1493-03-4, Difluoroiodomethane

1597-82-6, Paramethasone acetate 1630-94-0, 1,1-DimethylCyclopropane 1691-13-0, 1,2-Difluoroethylene 1722-62-9, Mepivacaine hydrochloride 1759-88-2 1867-66-9, Ketamine hydrochloride 2022-85-7, Flucytosine 2068-78-2, Vincristine sulfate 2314-97-8, IodotriFluoromethane 2366-52-1, 1-Fluorobutane 2375-03-3, Methylprednisolone sodium succinate 2392-39-4, Dexamethasone sodium phosphate 2511-95-7, 1,2-DimethylCyclopropane 2551-62-4, Sulfur hexafluoride 3116-76-5, Dicloxacillin 3385-03-3, Flunisolide 3458-28-4, Mannose 3485-14-1, Cyclacillin 3511-16-8, Hetacillin 3529-04-2, Benzyldimethylhexadecylammonium bromide 3810-74-0, Streptomycin sulfate 3858-89-7, Chloroprocaine hydrochloride 4185-80-2, Methotrimeprazine hydrochloride 4428-95-9, Foscarnet 4431-00-9, Aurintricarboxylic acid 4697-36-3, Carbenicillin 4786-20-3, Crotononitrile 4901-75-1, 3-Ethyl-3-methyldiaziridine 5534-09-8, Beclomethasone dipropionate 5536-17-4, Arabinosyl adenine 5611-51-8, Triamcinolone hexacetonide 5714-22-7, Sulfur fluoride (S2F10) 6000-74-4, Hydrocortisone sodium phosphate 7281-04-1, Benzyldimethyldodecylammonium bromide 7297-25-8, Erythritol tetranitrate 7439-89-6, Iron, biological studies 7440-01-9, Neon, biological studies 7440-06-4D, Platinum, compds. 7440-15-5, Rhenium, biological studies 7440-24-6, Strontium, biological studies 7440-26-8, Technetium, biological studies 7440-48-4, Cobalt, biological studies 7440-63-3, Xenon, biological studies 7440-65-5, Yttrium, biological studies 7601-55-0, Metocurine iodide 7637-07-2, biological studies 7647-14-5, Sodium chloride, biological studies 7681-14-3, Prednisolone tebutate 7727-37-9, Nitrogen, biological studies 7728-73-6 7782-41-4, Fluorine, biological studies 7782-44-7, Oxygen, biological studies 7783-82-6, Tungsten hexafluoride 9001-75-6, Pepsin 9001-78-9, Alkaline phosphatase 9002-01-1, Streptokinase 9002-04-4, Thrombin 9002-60-2, Adrenocorticotropic hormone, biological studies 9002-61-3 9002-72-6, Growth hormone 9002-79-3, Melanocyte stimulating hormone 9002-89-5, Poly(vinyl alcohol) 9003-11-6 9003-39-8, PVP 9004-10-8, Insulin, biological studies 9004-34-6, Cellulose, biological studies 9004-54-0, Dextran, biological studies 9004-61-9, Hyaluronic acid 9004-67-5, Methyl Cellulose 9005-25-8, Starch, biological studies 9005-27-0, HETA-starch 9005-32-7, Alginic acid 9005-49-6, Heparin, biological studies 9005-64-5, Polyoxyethylene sorbitan monolaurate 9005-65-6, Polyoxyethylene sorbitan monooleate 9005-66-7, Polyoxyethylene sorbitan monopalmitate 9005-67-8, Polyoxyethylene sorbitan monostearate 9005-71-4, Polyoxyethylene sorbitan tristearate 9007-12-9, Calcitonin 9007-92-5, Glucagon, biological studies 9011-14-7, PMMA 9011-97-6, Cholecystokinin 9015-68-3, Asparaginase 9015-71-8, Corticotropin releasing factor 9036-19-5, Octoxynol 9039-53-6, Urokinase 9061-61-4, Nerve growth factor 10024-97-2, Nitrogen oxide (N2O), biological studies 11000-17-2, Vasopressin 11056-06-7, Bleomycin 11096-26-7, Erythropoietin 13264-41-0, Cetyldimethylethylammonium chloride 13292-46-1, Rifampin 13311-84-7, Flutamide 13647-35-3, Trilostane 15500-66-0, Pancuronium bromide 15663-27-1, Cisplatin 15686-71-2, Cephalexin 15687-27-1, Ibuprofen 16009-13-5, Hemin 16136-85-9 17598-65-1, Deslanoside 18010-40-7, Bupivacaine hydrochloride 18323-44-9, Clindamycin 18378-89-7, Plicamycin 18773-88-1, Benzyldimethyltetradecylammonium bromide 20187-55-7, Bendazac 20274-91-3 20830-75-5, Digoxin 21829-25-4, Nifedipine 22204-53-1, Naproxen 22494-42-4, Diflunisal 22916-47-8, Miconazole 23110-15-8, Fumagillin 23541-50-6, Daunorubicin hydrochloride 24356-66-9 24764-97-4, 2-Bromobutyraldehyde 24991-23-9 25104-18-1, Polylysine 25151-81-9, Prostanoic acid 25316-40-9, Adriamycin 25322-68-3 25322-68-3D, PEG, ethers 25322-69-4, Polypropylene glycol 25513-46-6, Polyglutamic acid 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Poly(lactic acid) 26171-23-3, Tolmetin 26780-50-7, Glycolide-lactide copolymer

26787-78-0, Amoxicillin 26839-75-8, Timolol 28911-01-5, Triazolam 29121-60-6, Vaninolol 29767-20-2, Teniposide 30516-87-1, Azidothymidine 31637-97-5, Etofibrate 33069-62-4, Taxol 33125-97-2, Etomidate 33419-42-0, Etoposide 33507-63-0, Substance p 34077-87-7, DiChlorotrifluoroethane 34787-01-4, Ticarcillin 36322-90-4 36637-19-1, Etidocaine hydrochloride 36791-04-5, Ribavirin 38000-06-5, Polylysine 38194-50-2, Sulindac 38821-53-3, Cephradine 39391-18-9, Cyclooxygenase 41575-94-4, Carboplatin 42399-41-7, Diltiazem 47141-42-4, Levobunolol 50370-12-2, Cefadroxil 50402-72-7, Piperidine-2,3,6-trimethyl 50700-72-6, Vecuronium bromide 50972-17-3, Bacampicillin 51264-14-3, Amsacrine 52205-73-9, Estramustine phosphate sodium 52365-63-6, Dipivefrin 53045-71-9, 1-Pentene-3-bromo 53188-07-1, Trolox 53678-77-6, Muramyldipeptide 53994-73-3, Cefaclor 54965-24-1, Tamoxifen citrate 55142-85-3, Ticlopidine 57223-18-4, 1-Nonen-3-yne 59277-89-3, Acyclovir 59467-96-8, Midazolam hydrochloride 60118-07-2, Endorphin 62031-54-3, Fibroblast growth factor 62229-50-9, Epidermal growth factor 62232-46-6, Bifemelane hydrochloride 62571-86-2, Captopril 62683-29-8, Colony stimulating factor 63659-18-7, Betaxolol 65277-42-1, Ketoconazole 68302-57-8 68367-52-2, Sorbinil 69279-90-9, Ansamitocin 72702-95-5, Ponalrestat 73218-79-8, Apraclonidine hydrochloride 73984-11-9 74381-53-6, Leuprolide acetate 74790-08-2, Spiroplatin 75847-73-3, Enalapril 76547-98-3, Lisinopril 77181-69-2, Sorivudine 80755-87-9 81486-22-8, Nipradilol 82159-09-9, Epalrestat 82410-32-0, Ganciclovir 82964-04-3, Tolrestat 83869-56-1, Granulocyte macrophage colony stimulating factor **86090-08-6**, **Angiostatin** 88096-12-2 89149-10-0, 15-Deoxyspergualin 98023-09-7 99896-85-2 106956-32-5, Oncostatin M 113852-37-2, Cidofovir 116632-15-6, 1.2.3-Nonadecanetricarboxylic acid 2-hydroxytrimethylester 119813-10-4, Carzelesin 120279-96-1, Dorzolamide 120287-85-6D, Cetrorelix, derivs. 121181-53-1, Filgrastim 124389-07-7, Muramyltripeptide 127464-60-2, Vascular endothelial growth factor
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of solid porous matrixes for pharmaceutical uses)

IT 127984-74-1, Somatuline 130209-82-4, Latanoprost 139639-23-9, Tissue plasminogen activator 141436-78-4, **Protein** kinase c 143011-72-7, Granulocyte colony stimulating factor 148717-90-2, Squalamine 163702-07-6 169939-94-0, LY333531 216245-16-8 216245-28-2 216245-32-8 216382-88-6, Imidazopyridine 216441-58-6, Lecosim
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prepn. of solid porous matrixes for pharmaceutical uses)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:424365 HCAPLUS
DOCUMENT NUMBER: 129:91388
TITLE: Recursive sequence recombination and screening as a tool for the in vitro evolution of gene products
INVENTOR(S): Patten, Phillip A.; Stemmer, Willem P. C.
PATENT ASSIGNEE(S): Maxygen, Inc., USA; Patten, Phillip A.; Stemmer, Willem P. C.
SOURCE: PCT Int. Appl., 123 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 13
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9827230	A1	19980625	WO 1997-US24239	19971217
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6335160	B1	20020101	US 1996-769062	19961218
AU 9857292	A1	19980715	AU 1998-57292	19971217
AU 732146	B2	20010412		
EP 946755	A1	19991006	EP 1997-953571	19971217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001506855	T2	20010529	JP 1998-528054	19971217
AU 9923816	A1	19990812	AU 1999-23816	19990416

PRIORITY APPLN. INFO.:

US 1996-769062	A1	19961218
AU 1995-29714	A3	19950217
WO 1995-US2126	A2	19950217
US 1995-564955	A2	19951130
US 1996-537874	A2	19960304
US 1996-621859	A2	19960325
US 1996-650400	A2	19960520
WO 1996-US19256	A2	19961202
WO 1997-US24239	W	19971217

AB A method for development of proteins with new combinations of properties by recursive recombination of coding sequences of different origins and screening of gene products for desired properties is described. Recombination can be in vitro, or in vivo, e.g. using the cre/loxP system. Further variation can be introduced using mutagenesis-prone methods such as DNA repair. One method is denaturing and renaturing a population of fragments of 20-100 base pairs and selecting for those hybrids with base pair mismatches. These mismatched sequences are then ligated together to generate new sequences that will undergo DNA repair-mediated mutation. The method is flexible enough to allow coarse, or large scale, changes in sequences or it can be used at a very fine level: generating changes in a small subsequence. Many screening procedures may be used, but they must be carefully designed to detect changes of interest. Novel variants of calf intestinal alk. phosphatase with novel substrate specificity, human .alpha. interferon with higher specific activity, and luciferases with increased stability are generated.

IC ICM C12Q001-68
ICS C12P019-34; G01N033-53; C12N009-12; C12N009-50; C12N009-56; C12N015-63; C07K014-435

CC 3-1 (Biochemical Genetics)

ST **protein** evolution recursive sequence recombination

IT **Peptides**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(atrial, development of novel variants of; recursive sequence recombination and screening as tool for in vitro evolution of gene products)

IT Signal transduction (biological)
(coupling of mammalian G **proteins** to, in yeast, in recursive sequence recombination engineering of **proteins**; recursive sequence recombination and screening as tool for in vitro evolution of gene products)

IT Apolipoproteins

CD40 ligand
Chaperonins
Chemokines
Ciliary neurotrophic factor
Collagens, biological studies
Complement receptor type 1
Fibrinogens
Fibronectins
G **proteins** (guanine nucleotide-binding **proteins**)
Gonadotropins
Haptoglobin
Hedgehog **protein**
Hemoglobins
Immunoglobulins
Interferon .alpha.
Interferon .gamma.
Interleukins
Lactoferrins
Leukemia inhibitory factor
Protein A
Protein G
Serum **albumin**
Stem cell factor
Superantigens
Transferrins
Transforming growth factor .alpha.
Transforming growth factors .beta.
.alpha.2-Macroglobulins
.delta.-Endotoxins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(development of novel variants of; recursive sequence recombination and screening as tool for in vitro evolution of gene products)

IT Glycoproteins (specific **proteins** and subclasses)
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(neutrophil inhibitory factor, development of novel variants of; recursive sequence recombination and screening as tool for in vitro evolution of gene products)

IT Genetic engineering
(of **protein** properties; recursive sequence recombination and screening as tool for in vitro evolution of gene products)

IT Mutagenesis
Protein engineering
(recursive sequence recombination and screening as tool for in vitro evolution of gene products)

IT 8001-27-2, Hirudin 9000-94-6, Antithrombin 9001-25-6, Blood coagulation factor VII 9001-28-9, Blood coagulation factor IX 9001-29-0, Blood coagulation factor X 9001-78-9, Alkaline phosphatase 9002-01-1, Streptokinase 9002-64-6, Parathormone 9002-69-1, Relaxin 9002-72-6, Somatotropin 9004-10-8, Insulin, biological studies 9007-12-9, Calcitonin 9014-00-0, Luciferase 9014-01-1, Subtilisin 9014-42-0, Thrombopoietin 9015-94-5, Renin, biological studies 9027-41-2, Hydrolase 9038-70-4, Somatomedin 9039-53-6, Urokinase 9041-92-3, .alpha.1 Antitrypsin 9054-89-1, Superoxide dismutase 9073-60-3, .beta.-Lactamase 11096-26-7, Erythropoietin 37228-64-1, Glucocerebrosidase 51110-01-1, Somatostatin 62229-50-9, Epidermal growth factor 62683-29-8, Colony stimulating factor 69521-94-4, Thymosin .alpha.1 80295-54-1, Complement c5a 81627-83-0, M-CSF 83869-56-1, GM-CSF 85637-73-6, Atrial natriuretic factor **86090-08-6, Angiostatin** 106956-32-5, Oncostatin M 113189-02-9, Blood coagulation factor VIII 139639-23-9, Tissue

plasminogen activator 143011-72-7, G-CSF 169494-85-3, Leptin 185857-51-6, Neurturin
RL: BSU (Biological study, unclassified); BIOL (Biological study) (development of novel variants of; recursive sequence recombination and screening as tool for in vitro evolution of gene products)

L21 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1992:221566 HCAPLUS
DOCUMENT NUMBER: 116:221566
TITLE: Intravascular embolizing agent containing angiogenesis inhibiting substance as antitumor agents
INVENTOR(S): Okada, Hiroaki; Kamei, Shigeru; Yoshioka, Toshio
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 470569	A1	19920212	EP 1991-113173	19910806
EP 470569	B1	19951122		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 5202352	A	19930413	US 1991-740849	19910806
AT 130517	E	19951215	AT 1991-113173	19910806
CA 2048544	AA	19920209	CA 1991-2048544	19910807
JP 05000969	A2	19930108	JP 1991-197730	19910807
JP 3120187	B2	20001225		
JP 2001039869	A2	20010213	JP 2000-254260	19910807

PRIORITY APPLN. INFO.: JP 1990-210622 A 19900808
JP 1991-6323 A 19910123
JP 1991-197730 A3 19910807

AB Pharmaceutical compns. contg. an intravascular embolizing agent and an angiogenesis-inhibiting substance are antitumor agents. The intravascular embolizing agent strengthens the antitumor effect of the angiogenesis-inhibiting substance and serves to reduce the dose and undesirable side effects. Use of the agent in combination with an angioneoplastic agent brings about further strong and long-lasting antitumor effects. Thus, 6-O-(N-chloroacetylcarbamoyl)fumagillol (I) and lactic acid-glycolic acid copolymer were dissolved in a mixt. of CH2Cl2 and CHCl3 and the resultant soln. was poured into aq. soln. of polyvinyl alc. and homogenized. The solvents then were evapd. and the microspheres were freeze-dried. Rabbits were transplanted s.c. with carcinogens than were injected with a dispersion of microspheres contg. 1 mg I for 5 days. The vol. ratio of tumor after 5 days was 36% of the control.

IC ICM A61K037-12
ICS A61K031-765; A61K031-725
ICI A61K037-12, A61K031-765, A61K031-725, A61K031-335
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1
IT Ceramic materials and wares
Albumins, biological studies
Collagens, biological studies
Gelatins, biological studies
Metals, biological studies
Peptides, biological studies
Polysaccharides, biological studies
Salts, biological studies

Waxes and Waxy substances
RL: BIOL (Biological study)
(pharmaceutical compn. contg. **angiogenesis inhibitors** and, as neoplasm **inhibitor**)

L21 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1991:623452 HCAPLUS
DOCUMENT NUMBER: 115:223452
TITLE: Modified blood platelet factor 4 (PF4) and methods of use
INVENTOR(S): Maione, Theodore E.
PATENT ASSIGNEE(S): Repligen Corp., USA
SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 407122	A1	19910109	EP 1990-307203	19900702
EP 407122	B1	19961002		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 5112946	A	19920512	US 1989-376333	19890706
CA 2019086	AA	19910106	CA 1990-2019086	19900615
EP 723015	A1	19960724	EP 1995-120360	19900702
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 143698	E	19961015	AT 1990-307203	19900702
ES 2092493	T3	19961201	ES 1990-307203	19900702
JP 03063297	A2	19910319	JP 1990-176513	19900705
PRIORITY APPLN. INFO.:			US 1989-376333	19890706
			EP 1990-307203	19900702

AB PF4, recombinant PF4 (rPF4), and analogs and mutants are conjugated to, e.g. antibodies, toxins, FITC, etc. The conjugate has increased angiogenic inhibitory activity and decreased heparin-binding activity. The modified PF4 is useful for treating angiogenic diseases and for inhibition of endothelial cell proliferation. PF4 may be modified to facilitate targeting of PF4 activity to specific locations. Melanoma tumor (B16-F10) growth in mice was inhibited by treatment with rPF4 or rPF4-241 (a mutant having 2 Lys-Lys couplets at the carboxy-terminus of rPF4 substituted with Gln-Glu couplets). RPF4-241 inhibited capillary growth in the chicken chorioallantoic membrane assay even at 1.25 nmol/disk. The inhibition was even more effective than that caused by equal concns. of rPF4. The inhibitory effect of rPF4-241 was not reversed by heparin.

IC ICM C12P021-02
ICS C07K007-10; A61K037-02; A61K047-48; A61K039-395
CC 1-6 (Pharmacology)
Section cross-reference(s): 3, 63
IT Molecular structure-biological activity relationship
(**angiogenesis-inhibiting**, of blood platelet factor 4 and **peptides** and analogs)
IT **Albumins**, compounds
Porphyrins
Proteins, specific or class
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(conjugates, with blood platelet factor 4 or analogs, **angiogenesis** and endothelial cell proliferation

inhibition with)

```
=> d his

     (FILE 'HOME' ENTERED AT 13:04:51 ON 11 FEB 2002)

     FILE 'REGISTRY' ENTERED AT 13:06:06 ON 11 FEB 2002
                E ANGIOSTATIN/CN
L1              1 S E3
                E ENDOSTATIN/CN
L2              1 S E3

     FILE 'HCAPLUS' ENTERED AT 13:06:42 ON 11 FEB 2002
L3          16244 S ALBUMIN (L) SERUM
L4          61074 S ALBUMIN#
L5           3470 S (FUSION OR CHIMER? ) (L) (PEPTIDE# OR PROTETIN# OR POLYPEPTID
L6          19894 S (FUSION OR CHIMER? ) (L) (PEPTIDE# OR PROTEIN# OR POLYPEPTIDE
L7            495 S L1 OR L2 OR ANGIOSTATIN# OR ENDOSTATIN#
L8            553 S ANGIOGENESIS (L) INHIBIT? (L) (PROTEIN# OR PEPTIDE# OR POLYPE
L9            996 S L7 OR L8
L10           118 S L4 (L) L6
L11             4 S L10 AND L9
L12            18 S L4 AND L9
L13       1186355 S PROTEIN# OR POLYPEPTIDE# OR PEPTIDE#
L14            18 S L12 AND L13
L15           485 S HETEROLOGOUS. (2A) SEQUENCE#
L16           621 S (HETEROLOGOUS (2A) SEQUENCE#)/AB
L17          1061 S L16 OR L15
L18             2 S L17 AND L14
L19             6 S L14 AND (CHIMER? OR FUSION? OR CHIMER?/AB OR FUSION?/AB)
L20             6 S L18 OR L19
L21            12 S L14 NOT L20
```

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=> fil reg
FILE 'REGISTRY' ENTERED AT 13:14:51 ON 11 FEB 2002
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STRUCTURE FILE UPDATES:    8 FEB 2002  HIGHEST RN 391197-07-2
DICTIONARY FILE UPDATES:   8 FEB 2002  HIGHEST RN 391197-07-2

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Calculated physical property data is now available.  See HELP PROPERTIES
for more information.  See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

The P indicator for Preparations was not generated for all of the
CAS Registry Numbers that were added to the H/Z/CA/CAplus files between
12/27/01 and 1/23/02.  Use of the P indicator in online and SDI searches
during this period, either directly appended to a CAS Registry Number
or by qualifying an L-number with /P, may have yielded incomplete results.
As of 1/23/02, the situation has been resolved.  Also, note that searches
conducted using the PREP role indicator were not affected.

Customers running searches and/or SDIs in the H/Z/CA/CAplus files
incorporating CAS Registry Numbers with the P indicator between 12/27/01
and 1/23/02, are encouraged to re-run these strategies.  Contact the
CAS Help Desk at 1-800-848-6533 in North America or 1-614-447-3698,
worldwide, or send an e-mail to help@cas.org for further assistance or to
receive a credit for any duplicate searches.

=> d que l1;d l1
L1             1 SEA FILE=REGISTRY ABB=ON ANGIOSTATIN/CN


L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2002 ACS
RN   86090-08-6  REGISTRY
CN   Angiostatin (9CI)  (CA INDEX NAME)
MF   Unspecified
CI   MAN
LC   STN Files:   ADISINSIGHT, ADISNEWS, BIOBUSINESS, BIOSIS, BIOTECHNO, CA,
       CANCERLIT, CAPLUS, CEN, CHEMCATS, CIN, EMBASE, IPA, MEDLINE, NAPRALERT,
       PROMT, RTECS*, TOXCENTER, TOXLIT, USPATFULL
         (*File contains numerically searchable property data)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
            272 REFERENCES IN FILE CA (1967 TO DATE)
             13 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            273 REFERENCES IN FILE CAPLUS (1967 TO DATE)


=> d que l2;d l2
```

L2 1 SEA FILE=REGISTRY ABB=ON ENDOSTATIN/CN

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 187888-07-9 REGISTRY
CN **Endostatin (9CI)** (CA INDEX NAME)
MF Unspecified
CI MAN
SR CA
LC STN Files: ADISINSIGHT, BIOSIS, BIOTECHNO, CA, CAPLUS, EMBASE, IPA, MRCK*, TOXCENTER, TOXLIT, USPATFULL
(*File contains numerically searchable property data)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
237 REFERENCES IN FILE CA (1967 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
240 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 13:15:05 ON 11 FEB 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 8 Feb 2002 VOL 136 ISS 7
FILE LAST UPDATED: 30 Jan 2002 (20020130/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the CAS Registry Numbers that were added to the CAS files between 12/27/01 and 1/23/02. As of 1/23/02, the situation has been resolved. Searches and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry Numbers with the P indicator executed between 12/27/01 and 1/23/02 may be incomplete. See the NEWS message on this topic for more information.
'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d his 13-

(FILE 'REGISTRY' ENTERED AT 13:06:06 ON 11 FEB 2002)

```
=> fil wpids
FILE 'WPIDS' ENTERED AT 13:26:37 ON 11 FEB 2002
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FILE LAST UPDATED: 08 FEB 2002              <20020208/UP>
MOST RECENT DERWENT UPDATE           200209   <200209/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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    (EVERY UPDATE IS THE DEFAULT). FOR PRICING INFORMATION
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    RESOURCE, PLEASE VISIT
         http://www.derwent.com/chemistryresource/index.html <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES,
    SEE http://www.derwent.com/dwpi/updates/dwpicov/index.html <<<

=> d his

     (FILE 'WPIDS' ENTERED AT 13:19:28 ON 11 FEB 2002)
                DEL HIS Y
L1          5898 S ALBUMIN
L2           458 S ENDOSTATIN# OR ANGIOSTATIN# OR ANGIOGENESIS  INHIBIT?
L3         36775 S FUSION OR CHIMER?
L4        116012 S PROTEIN# OR PEPTIDE# OR POLYPEPTIDE#
L5           115 S L1 AND L3 AND L4
L6             3 S L5 AND L2
                 E US2001056075/PN
L7             1 S E3
L8             3 S L6 OR L7
L9            12 S L1 AND L4 AND L2
L10            9 S L9 NOT L8
L11          970 S TYROSINE KINASE#
L12            0 S L10 AND L11
L13         1469 S HETEROLOGOUS  (4A) (SEQUENCE?)
L14           12 S L5 AND L13
L15            1 S L14 AND L2
L16            3 S L15 OR L8

     FILE 'WPIDS' ENTERED AT 13:26:37 ON 11 FEB 2002

=> d .wp 1-3

L16  ANSWER 1 OF 3  WPIDS COPYRIGHT 2002   DERWENT INFORMATION LTD
AN   2002-000412 [01]   WPIDS
DNC  C2002-000255
TI   Gas-filled microcapsules, useful for ultrasonic diagnosis, are prepared
     from functionalized poly(alkyl cyanoacrylate), allowing attachment of e.g.
     specific-binding agents.
DC   A13 A14 A25 A96 B04 D16
IN   BRIEL, A; DEBUS, N; HAUFF, P; HOFMANN, B; REINHARDT, M; ROESSLING, G;
     SYDOW, S; HOFMAN, B
PA   (SCHD) SCHERING AG
CYC  94
PI   DE 10013850   A1 20010920 (200201)*      32p
     WO 2001068150 A1 20010920 (200201)  EN
        RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
```

NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DK DM DZ
EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK
LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001052189 A 20010924 (200208)
ADT DE 10013850 A1 DE 2000-10013850 20000315; WO 2001068150 A1 WO 2001-EP2802 20010313; AU 2001052189 A AU 2001-52189 20010313
FDT AU 2001052189 A Based on WO 200168150
PRAI DE 2000-10013850 20000315
AB DE 10013850 A UPAB: 20020105
NOVELTY - Gas-filled microcapsules (A) that contain functionalized poly(alkyl cyanoacrylates) (B).
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(a) methods for preparing (A); and
(b) produced by methods (a).
USE - (A) are useful for ultrasonic diagnosis.
ADVANTAGE - Functionalization of (B) allows attachment of molecules that provide specific binding or modify kinetics, especially to delay clearance through the reticuloendothelial system (providing a longer diagnostic time window) or to accelerate hepatic metabolism. (B) are more stable against dilution than known microparticles, so permit a greater freedom in selection of doses and mode of administration.
Dwg.0/14

L16 ANSWER 2 OF 3 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-168463 [17] WPIDS
DNC C2001-050297
TI **Chimeric polypeptide** useful for modulating cell proliferation, cell differentiation, and cell death, comprising serum **albumin** having a biologically active **heterologous peptide sequence** inserted into it.
DC B04
IN GYURIS, J; LAMPHERE, L
PA (GPCB-N) GPC BIOTECH INC; (GYUR-I) GYURIS J; (LAMP-I) LAMPHERE L
CYC 94
PI WO 2001005826 A2 20010125 (200117)* EN 45p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2000061125 A 20010205 (200128)
US 2001056075 A1 20011227 (200206) <--
ADT WO 2001005826 A2 WO 2000-US19689 20000719; AU 2000061125 A AU 2000-61125 20000719; US 2001056075 A1 Provisional US 1999-144534P 19990719, CIP of US 2000-619285 20000719, US 2001-764918 20010118
FDT AU 2000061125 A Based on WO 200105826
PRAI US 1999-144534P 19990719; US 2000-619285 20000719; US 2001-764918 20010118
AB WO 200105826 A UPAB: 20010328
NOVELTY - A **chimeric polypeptide** (I) comprising serum **albumin protein** (SA) having one or more biologically active **heterologous peptide sequence**(s) inserted into it, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a nucleic acid (II) encoding (I);

(2) a delivery vector (III) comprising (II); and

(3) transfected cells comprising target cells which have been exposed to (III).

ACTIVITY - None given.

MECHANISM OF ACTION - Modulator of cell proliferation; inducer of apoptosis; modulator of differentiation of cell types (claimed).

The function of mouse serum **albumin** (MSA) with the RGD **peptide** (VRGDF) was displayed on the surface of the **protein** in the loop 53-58 region (MSA-myc-RGD). Triplicate wells of Cos7 cells were transfected with MSA-myc (the myc group was added to the C-terminal tail of MSA in this iteration), MSA-myc-RGD, or pAM-stuffer, and grown in the lower chamber of Transwell (RTM) tissue culture plate with BCE cells in the upper chamber. To stimulate growth of the BCE cells, fibroblast growth factor (FGF) was added to the lower chamber and not in the case of no FGF control and the cells were grown for 72 hours. To one set of wells, those with pAM7-stuffer, c-RGD **peptide** was also added. Cell growth was determined by a Calcein-binding fluorescence assay. The data revealed that addition of FGF resulted in a 2-fold stimulation of growth of the BCE cells. This growth was inhibited by the c-RGD **peptide** and also by the secreted MSA-myc-RGD **protein**.

USE - The **polypeptide** is useful for treating a disease in an organism. (III) comprising genetic material encoding (I) is useful for treating a disease in an organism, by introducing (III) into the target cells in vivo or ex vivo to induce the target cells to produce (I), and introducing ex vivo treated target cells into the organism. (I) and (III) are useful for modulating cell proliferation, cell differentiation, and cell death in an organism (claimed).

ADVANTAGE - (I) containing segments of SA and segments of biologically active **heterologous peptide sequences**, is efficient in increasing the lifetime of therapeutic **polypeptides** in the blood stream. (I) offer a substantial promise from a drug delivery standpoint, because SA is found in tissues and secretions throughout the body. The similarity of (I) to serum **albumin protein** in structure may camouflage these **polypeptides** biological mechanism which degrade foreign **peptides** even more effectively than known **fusion proteins** because the foreign **peptide** fragments are carried on **protein** that is substantially similar to a **protein** that is pervasive within an organism. The **proteins** retain the beneficial characteristics of SA (non-immunogenicity, high level of expression, efficient secretion, and long half-life), while supporting the additional desired biological function.

Dwg.0/3

L16 ANSWER 3 OF 3 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2000-259140 [23] WPIDS
DNC C2000-079426
TI New artificial operons comprising poynucleotides encoding DsbA, DsbB, DsbC and/or DsbD, useful for producing expression plasmids, co-transformants and foreign **proteins**.
DC B04 D16
IN KUROKAWA, Y; YANAGI, H; YURA, T
PA (HSPR-N) HSP RES INST INC; (HSPK-N) HSP KENKYUSHO KK
CYC 27
PI EP 992588 A1 20000412 (200023)* EN 41p
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
JP 2000083670 A 20000328 (200026) 23p
CA 2281035 A1 20000309 (200034) EN

ADT EP 992588 A1 EP 1999-117806 19990909; JP 2000083670 A JP 1998-255702 19980909; CA 2281035 A1 CA 1999-2281035 19990909

PRAI JP 1998-255702 19980909

AB EP 992588 A UPAB: 20000516

NOVELTY - An artificial operon (I) is new and comprises polynucleotides encoding DsbC and DsbD.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an expression plasmid (II) carrying the artificial operon (I);

(2) a co-transformant (III) harboring the expression plasmid (II) and an expression vector comprising polynucleotides encoding a foreign **protein**;

(3) a host cell (IV) containing (II);

(4) a method for producing a foreign **protein** comprising culturing (III) or (IV);

(5) a composition comprising (I) or (II); and

(6) a kit comprising (I) or (II).

USE - The operons (I) are useful for transforming a host cell and expressing a foreign **protein**.

ADVANTAGE - The operon is capable of expressing a foreign **protein** in a soluble form with maintaining a normal tertiary structure. Accurate disulfide bond formation in the periplasm can be surprisingly efficiently carried out and a soluble expression product can be further efficiently obtained when an expression vector of the Dsb family **proteins** comprising a **protein** for forming or isomerizing disulfide bonds as well as a **protein** which can control the reactivity of DsbA or DsbC is constructed and the coexpression effects of these **proteins** in the secretion of a foreign **protein** are studies.

Dwg.0/9

```
=> d his

     (FILE 'WPIDS' ENTERED AT 13:19:28 ON 11 FEB 2002)
                DEL HIS Y
L1           5898 S ALBUMIN
L2            458 S ENDOSTATIN# OR ANGIOSTATIN# OR ANGIOGENESIS  INHIBIT?
L3          36775 S FUSION OR CHIMER?
L4         116012 S PROTEIN# OR PEPTIDE# OR POLYPEPTIDE#
L5            115 S L1 AND L3 AND L4
L6              3 S L5 AND L2
                E US2001056075/PN
L7              1 S E3
L8              3 S L6 OR L7
L9             12 S L1 AND L4 AND L2
L10             9 S L9 NOT L8
L11           970 S TYROSINE KINASE#
L12             0 S L10 AND L11
L13          1469 S HETEROLOGOUS  (4A) (SEQUENCE?)
L14            12 S L5 AND L13
L15             1 S L14 AND L2
L16             3 S L15 OR L8

     FILE 'WPIDS' ENTERED AT 13:26:37 ON 11 FEB 2002
L17            11 S L14 NOT L16

=> d .wp 1-11

L17  ANSWER 1 OF 11  WPIDS COPYRIGHT 2002   DERWENT INFORMATION LTD
AN   2002-055149 [07]   WPIDS
DNC  C2002-015688
TI   Stable plastid transformation and expression vector competent for stably
     transforming a plastid genome for expression of heterologous genes, e.g.
     insulin.
DC   B04 C06 D16
IN   DANIELL, H
PA   (AUBU) UNIV AUBURN; (UYFL-N) UNIV CENT FLORIDA
CYC  95
PI   WO 2001072959 A2 20011004 (200207)* EN 305p
        RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
            NL OA PT SD SE SL SZ TR TZ UG ZW
         W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
            DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
            LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD
            SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
     AU 2001076813 A  20011008 (200208)
ADT  WO 2001072959 A2 WO 2001-US6288 20010228; AU 2001076813 A AU 2001-76813
     20010228
FDT  AU 2001076813 A Based on WO 200172959
PRAI US 2001-185987   20010223; US 2000-185987P  20000301; US 2001-263424P
     20010123; US 2001-263473P  20010123; US 2001-263668P  20010123
AB   WO 200172959 A UPAB: 20020130
     NOVELTY - A stable plastid transformation and expression vector competent
     for stably transforming a plastid genome, is new.
          DETAILED DESCRIPTION - A stable plastid transformation and expression
     vector competent for stably transforming a plastid genome, is new, which
     comprises an expression cassette comprising as operably linked components
     in the 5' to 3' direction of translation:
          (a) a promoter operative in the plastid,
          (b) a selectable marker sequence,
```

(c) a **heterologous** DNA **sequence** coding for a biopolymer-proinsulin **fusion** gene, a cholera toxin B-subunit-proinsulin **fusion** gene, a plastid DNA fragment comprising a 5'UTR sequence positioned upstream of the promoter to enhance translation of proinsulin **protein**, a Cry2aA2 operon which comprises two open reading frames (ORFs) where the ORF immediately upstream of Cry2aA2 codes for a putative chaperonin, a cholera toxin B-subunit-plastid modified proinsulin (PtPris) **fusion** wherein its nucleotide sequence is modified such that the codons are optimized for plastid expression, cholera toxin B-subunit-mini-proinsulin (Mpris) **fusion** where its codons are optimized for plastid expression, a synthetic **protein**-base polymer (PBP) fused to a biologically active molecule, an interferon gene, a insulin-like growth factor gene, a human serum **albumin** (HSA) gene, or a biopolymer **fusion** gene,

(d) a transcription termination region functional in the plastid, and

(e) flanking, each side of the expression cassette, flanking DNA sequences which are homologous to a DNA sequence inclusive of a spacer sequence of the target plastid genome, whereby stable integration of the **heterologous** coding **sequence** into the plastid genome of the target plant is facilitated throughout homologous recombination of the flanking sequence with the homologous sequence in the target plastid genome.

INDEPENDENT CLAIMS are also included for the following:

(1) a stably transformed plant which comprises plastid stably transformed with the above vector, or the progeny or seeds of it;

(2) a process for stably transforming a higher target plant species which comprises introducing into the plastid genome of the plant the above vector; and

(3) a transformed and edible tobacco or alfalfa plant of (1);

(4) a process for recovering a biopolymer by a one step extraction and purification by using the reversible property of the biopolymer; and

(5) a process for recovery of a synthetic **protein**-base polymer (PBP) fused with a biologically active molecule by one step extraction and purification by using the reversible property of the biopolymer of (4).

ACTIVITY - None given.

MECHANISM OF ACTION - None given.

USE - The vector can be used to stably transform a plant. It can be used to produce edible tobacco, or alfalfa plants (all claimed).

ADVANTAGE - By producing the heterologous genes in an edible plant, the **proteins** can be orally delivered to patients that require them, e.g. insulin to diabetics, without the need for injections.

Dwg.0/10

L17 ANSWER 2 OF 11 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-657166 [75] WPIDS
DNN N2001-489839 DNC C2001-193383
TI Novel stem cell growth factor like **polypeptides** and polynucleotides for identifying modulators useful for treating diseases such as Alzheimer's disease, cancer, rheumatoid arthritis, osteoporosis.
DC B04 D16 S03
IN DICKSON, M; DRMANAC, R T; LABAT, I; LIU, C; MIZE, N K; NISHIKAWA, M; SINKU, A; STACHE-CRAIN, B; TANG, T Y; TILLINGHAST, J S
PA (HYSE-N) HYSEQ INC; (KIRI) KIRIN BEER KK
CYC 95
PI WO 2001077169 A2 20011018 (200175)* EN 132p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK

DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD
SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

ADT WO 2001077169 A2 WO 2001-US11208 20010405

PRAI US 2001-266614P 20010205; US 2000-543774 20000405; US 2000-215733P 20000628; US 2001-757562 20010109

AB WO 200177169 A UPAB: 20011220

NOVELTY - An isolated stem cell growth factor-like **polypeptide** (I) comprising a 272, 273, 251, 279 or 272 residue amino acid sequence (S1), all fully defined in the specification, or a portion of mature **protein**, fragment, analog, variant or derivative that retains stem growth factor activity, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an isolated polynucleotide (II) encoding (I), comprising a 343, 819, 822, 2384 or 2101 base pair sequence (S2), fully defined in the specification respectively, or a fragment, analog, variant or derivative that encodes a **polypeptide** retaining stem growth factor activity;

(2) an isolated polynucleotide comprising the complement of (II);

(3) a vector/expression vector comprising (II);

(4) a host cell (III) genetically engineered to express (II);

(5) preparation of (I), comprising culturing (III) under expression condition, and recovering the **polypeptide**;

(6) a culture medium comprising (I) effective to maintain survival of or promote proliferation of a stem cell or germ cell;

(7) a composition comprising (I) and a carrier or diluent;

(8) an antibody (Ab) specific to (I);

(9) a kit comprising (I) or Ab;

(10) detecting (M1) (II) in a sample comprising:

(a) contacting the sample with the compound that binds (II) and detecting the complex formed; and

(b) contacting the sample under stringent hybridization condition with primers that anneal to (II), amplifying a product comprising at least a portion of (II) and detecting the product;

(11) detecting (M2) (I) in a sample comprising contacting the sample with a compound specific to (I) and detecting formation of a complex;

(12) a nucleic acid array (IV) comprising (II) or a unique segment of (II) attached to a surface;

(13) treating (M3) a subject in need of enhanced activity or expression of (I) comprising administering a composition comprising an agonist of (I) to the subject;

(14) treating (M4) a subject in need of decreased activity or expression of (I) comprising administering a composition comprising an antagonist of (I) to the subject;

(15) a stromal cell genetically engineered to express (I);

(16) an implant comprising a cell genetically engineered to express (I);

(17) an isolated polynucleotide (V) comprising the **protein** coding cDNA insert of the plasmid deposited with the National Institute of Bioscience and Human-Technology Agency of Industrial Science and Technology (Zip code 305-8566; Higashi 1-1-3, Tsukuba, Ibaraki, Japan), on June 26, 2000 under accession number FERMBP-7198 or FERMBP-7197; and

(18) a mature **polypeptide** expression product expressed by (V) in a suitable host cell.

ACTIVITY - Antiinflammatory; immunosuppressive; nootropic; neuroprotective; antiarthritic; antimicrobial; vulnerary; cytostatic; antidiabetic; virucide; antiinfertility; anticonvulsant; vasotropic; antiParkinsonian; immunostimulant; dermatological; antirheumatic; antiulcer; osteopathic; tranquilizer; cerebroprotective; antitumor.

MECHANISM OF ACTION - Gene therapy; modulator.
No biological data is given.
USE - (M1) is useful for detecting (II) in a sample; and (M2) is useful for detecting (I) in a sample. (I) is useful for identifying a compound that binds to (I). The method comprises contacting the compound with (I) to form a **polypeptide**/compound complex and detecting the complex. The method can optionally be performed by contacting the compound with (I) in a cell to form a complex, where the complex drives expression of a reporter gene sequence in a cell, and detecting the complex by detecting reporter gene expression. (I), (II), (M3) and (M4) are useful for treating a subject in need of altered (enhanced or decreased) activity or expression of (I). (I) is useful for supporting proliferation or survival of a stem cell or germ cell which is preferably primordial germ cell, germ line stem cell, embryonic stem cell, hematopoietic stem cell, hematopoietic progenitor cell, pluripotent cell or totopotent cell. (All claimed), where hematopoietic progenitor cell cultured using (I) can replace as a graft for the bone marrow transplantation or cord blood transplantation for treating a variety of diseases such as immunodeficiency syndrome such as chronic granulomatous disease, duplicated immunodeficiency syndrome, agammaglobulineamia, Wiskott-Aldrich syndrome, acquired immunodeficiency syndrome (AIDS), thalassemia, hemolytic anemia due to enzyme defect, congenital anemia such as sicklemia, Gaucher's disease, lysosomal storage diseases such as mucopolysaccharidosis, adrenal white matter degeneration, a variety of cancer and tumors. (II) is also used in interaction trap assays, to identify polynucleotides encoding the other **protein** with which binding occurs or to identify inhibitors of the binding interaction; and in assays to determine biological activity, including in a panel of multiple **proteins** for high-throughput screening, to raise antibodies or to elicit another immune response, as a reagent (including the labeled reagent) in assays designed to quantitatively determine levels of the **protein** (or its receptor) in biological fluids, as markers for tissues in which the corresponding **protein** is preferentially expressed (either constitutively or at a particular stage of tissue differentiation or development or in a disease state), and, of course, to isolate correlative receptors or ligands. where **proteins** involved in these binding interactions can also be used to screen for **peptide** or small molecule inhibitors or agonists of the binding interaction. (I) exhibits stem cell growth factor activity involved in proliferation, differentiation and survival or pluripotent and totipotent stem cells for treating diseases such as Parkinson's, Alzheimer's disease and other neurodegenerative diseases; hematopoiesis regulating activity useful for treating disorders such as thrombocytopenia; immune stimulating or immune suppressing activity, which is useful for the treatment of various immune deficiencies and disorders e.g. severe combined immunodeficiency (SCID); autoimmune disorders e.g. multiple sclerosis, systemic lupus erythematosus, rheumatoid arthritis, autoimmune pulmonary inflammation.
Dwg.0/7

L17 ANSWER 3 OF 11 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-290925 [30] WPIDS
DNN N2001-207764 DNC C2001-089281
TI Producing a post-translationally modified heterologous **polypeptide** such as immunoglobulin, integrin, addressin, selectin, in plant host system, comprises altering natural post-translational modification abilities of plant.
DC B04 C06 D16 P13
IN BASSUNER, R; MANJUNATH, S; RUSSELL, D
PA (MONS) MONSANTO CO

CYC 93
PI WO 2001029242 A2 20010426 (200130)* EN 132p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2001015736 A 20010430 (200148)
ADT WO 2001029242 A2 WO 2000-US29027 20001020; AU 2001015736 A AU 2001-15736 20001020
FDT AU 2001015736 A Based on WO 200129242
PRAI US 2000-195282P 20000407; US 1999-160758P 19991021
AB WO 200129242 A UPAB: 20010603
NOVELTY - Producing (M1) a post-translationally (PT) modified heterologous **polypeptide** in a plant host system (I) comprising altering the natural PT modification abilities of (I), is new.

DETAILED DESCRIPTION - Producing (M1) a post-translationally (PT) modified heterologous **polypeptide** in a plant host system (I) comprising:

(a) expressing the heterologous **polypeptide**, where the cells of (I) have been transformed with one or more expression vectors containing a nucleic acid **sequence** encoding a **heterologous polypeptide**;

(b) expressing a PT modifying enzyme, where the cells of (I) have been transformed with an expression vector containing a nucleic acid sequence encoding a PT modifying enzyme;

(c) expressing a heterologous **polypeptide** and a PT modifying enzyme where the cells of (I) have been transformed with a first expression vector containing a nucleic acid **sequence** encoding a **heterologous polypeptide** and a second expression vector containing a nucleic acid sequence encoding a PT modifying enzyme; and

(d) cross-pollinating a first (I) whose cells have been transformed with a first expression vector containing a nucleic acid **sequence** encoding a **heterologous polypeptide**, and a second (I), where the cells of (I) have been transformed with a second expression vector containing a nucleic acid sequence encoding a PT modifying enzyme.

INDEPENDENT CLAIMS are also included for the following:

(1) (I) expressing a PT modified heterologous **polypeptide** where the natural PT modification abilities of (I) have been altered where

(a) the cells of (I) have been transformed with:

(i) an expression vector comprising a nucleic acid **sequence** encoding a **heterologous polypeptide**;

(ii) an expression vector comprising a PT modifying enzyme;

(iii) a first expression vector comprising a nucleic acid sequence encoding a heterologus **polypeptide** and a second expression vector comprising a nucleic acid sequence encoding a PT modifying enzyme;

(b) (I) that produces PT modified heterologous **polypeptide** and expresses a first expression vector comprising a nucleic acid **sequence** encoding a **heterologous polypeptide** and a second express vector comprising a nucleic acid sequence encoding a PT modifying enzyme;

(2) a plant (II) produced by M1;

(3) a seed produced from (II); and

(4) an expression vector comprising one or more nucleic acid sequences encoding one or more of heterologous **polypeptide** and a PT modifying enzyme.

USE - Producing in a plant host system, a post-translationally modified heterologous **polypeptide** such as immunoglobulin, integrin, addressin, selectin, homing receptor, T-cell receptor unit,

soluble major histocompatibility complex antigen, growth factor receptor, growth factor, growth hormone, cell cycle **protein**, viral antigen, bacterial antigen vaccine, fibrinogen, thrombin or hyaluronic acid, a blood **protein** (e.g. serum **albumin**, hemoglobin, Factor VII, Factor VIII modified Factor VIII, Factor IX, Factor X, tissue plasminogen factor, **Protein** C, von Willebrand factor, antithrombin III, and erythropoietin), a colony stimulating factor (e.g. granulocyte colony-stimulating factor, macrophage colony-stimulating factor and granulocyte macrophage colony-stimulating factor), a cytokine (e.g. interleukins 1 through 18, interleukin-T, interferon alpha, interferon beta, interferon gamma, leukemia inhibitory factor, oncostatin, transforming growth factor beta, tumor necrosis factor alpha, and tumor necrosis factor beta), a membrane surface **protein** (e.g. insulin receptor, epidermal growth factor receptor, and beta -adrenergic receptor), a structural **protein** (e.g. collagen types I through XX, fibrinogen, elastin, tubulin, actin and myosin), or an antibody or its functional equivalent (e.g. immunoglobulin (Ig) IgA, IgG, IgD, IgE, IgM, Fab and Fv) (claimed).
Dwg.0/24

L17 ANSWER 4 OF 11 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2000-646950 [62] WPIDS
DNC C2000-195631
TI Expression cassette having a regulatory element comprising a yeast GCN4 transcription factor promoter sequence, useful for producing therapeutic **peptides** or for detecting **protein-protein** interactions.
DC B04 C03 D16
IN ENGELBERG, D; MIMRAM, A
PA (YISS) YISSUM RES DEV CO HEBREW UNIV JERUSALEM
CYC 90
PI WO 2000052181 A2 20000908 (200062)* EN 33p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000028236 A 20000921 (200065)
ADT WO 2000052181 A2 WO 2000-IL118 20000225; AU 2000028236 A AU 2000-28236 20000225
FDT AU 2000028236 A Based on WO 200052181
PRAI IL 1999-128757 19990228
AB WO 200052181 A UPAB: 20001130
NOVELTY - An expression cassette (I) comprising a regulatory element having the nucleotide sequence of the GCN4 transcription factor promoter, is new.
DETAILED DESCRIPTION - (I) comprises a regulatory element having the nucleotide sequence of the GCN4 transcription factor promoter, a **heterologous** coding **sequence** downstream of the regulatory element, a termination signal operably linked downstream to the **heterologous sequence**, and optionally, an operably linked selectable marker.
INDEPENDENT CLAIMS are also included for the following:
(1) an expression vector comprising (I);
(2) a method for the regulated production of a therapeutic **protein** or **peptide** in eukaryotic cells by:
(a) transforming eukaryotic cells with (I);
(b) selecting from the cell population obtained in (a) those cells harboring the expression vector, and growing them;

(c) inducing expression of the **heterologous** coding **sequence** in the cells under amino acid starvation conditions or under conditions which mimic starvation to obtain a functionally active **protein** or **peptide** encoded by the **heterologous** coding **sequence**; and

(d) optionally, isolating the **protein** or **peptide** obtained in (b) from the cells;

(3) a therapeutic **protein** or **peptide** produced by the method of (2); and

(4) eukaryotic cells transformed with (I) and capable of expressing the **heterologous** coding **sequence**.

USE - The expression cassette, where the **heterologous** coding **sequence** encodes a therapeutic **protein** or **peptide**, is useful in the production of a therapeutic **protein** or **peptide** and in the preparation of a pharmaceutical composition containing the **peptide** or **protein**. When the coding sequence encodes a **chimeric protein**, the expression cassette is useful in the detection of **protein-protein** interactions (all claimed). The expression cassette may further be used for the expression of libraries, for cloning via functional complementations of mutants, or for screening genes, which allow growth under certain conditions (e.g. toxic conditions or in the presence of drugs), as well as in the expression of the Sos or Ras recruitment system.

ADVANTAGE - The expression system differs from currently available vectors since it is controlled at the translational level, allowing rapid induction and under non-inducible conditions, expression of these vectors is well suppressed. It allows fine control on the level of expression, since this level is proportional to the concentration of the inducer. An integrated version of the cassette is almost efficient as a multicopy version. The use of yeast for the expression of foreign **proteins** is safer than the use of prokaryotes such as Escherichia coli which has toxic cell wall pyrogens, thus products from these organisms must be tested extensively. Further, yeasts may be grown rapidly on a simple media and to high cell density, their genetics are advanced and can be manipulated almost as readily as E. coli. The use of yeast cells for **protein** production reduces cost and is less time consuming.

Dwg.2/11

L17 ANSWER 5 OF 11 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2000-611444 [58] WPIDS
DNN N2000-452817 DNC C2000-182930
TI Novel PRO **polypeptides** and agonists and antagonists of them, used to diagnose and treat cardiovascular, endothelial and angiogenic disorders.
DC B04 D16 S03
IN ASHKENAZI, A J; BAKER, K P; FERRARA, N; GERBER, H; GERRITSEN, M E; GODDARD, A; GURNEY, A L; HILLAN, K J; MARSTERS, S A; PAONI, N F; PITTI, R M; WATANABE, C K; WILLIAMS, P M; WOOD, W I
PA (GETH) GENENTECH INC
CYC 91
PI WO 2000053757 A2 20000914 (200058)* EN 179p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000033816 A 20000928 (200067)
EP 1159419 A1 20011205 (200203) EN

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

ADT WO 2000053757 A2 WO 2000-US5004 20000224; AU 2000033816 A AU 2000-33816 20000224; EP 1159419 A1 EP 2000-912015 20000224, WO 2000-US5004 20000224

FDT AU 2000033816 A Based on WO 200053757; EP 1159419 A1 Based on WO 200053757

PRAI WO 2000-US4414 20000222; WO 1999-US5028 19990308; US 1999-123957P 19990312; WO 1999-US12252 19990602; US 1999-144758P 19990720; US 1999-145698P 19990726; WO 1999-US20111 19990901; WO 1999-US21090 19990915; WO 1999-US28313 19991130; WO 1999-US28409 19991130; WO 1999-US28565 19991202; WO 2000-US219 20000105; WO 2000-US4341 20000218; WO 2000-US4342 20000218

AB WO 200053757 A UPAB: 20001114

NOVELTY - A composition comprising a PRO179, PRO238, PRO364, PRO844, PRO1760, PRO205, PRO321, PRO333, PRO840, PRO877, PRO878, PRO879, PRO882, PRO885, or PRO887 **polypeptide** (I) or an agonist or antagonist of it, in a carrier, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an article of manufacture comprising the novel composition in a labeled container, or in a container including a package insert, the label or insert referring to the treatment of a cardiovascular, endothelial or angiogenic disorder;

(2) identifying an agonist, or inhibitor, of (I), comprising contacting cells and a test compound to be screened under conditions to induce a cellular response by the **polypeptide**, and determining the induction of the cellular response, to determine an agonist or inhibitor;

(3) identifying an inhibitor of (I) activity, comprising contacting the test compound with the **polypeptide** under interaction conditions, and determining if the **polypeptide** activity is inhibited;

(4) identifying a (I) expression inhibitor, comprising contacting the cells with a test compound under expression conditions, and determining if expression is inhibited;

(5) an agonist or antagonist of (I);

(6) a compound that inhibits (I) expression in a mammalian cell;

(7) an antibody that binds to (I);

(8) a recombinant retroviral particle comprising retroviral vector comprising a promoter, a nucleic acid encoding (I) and a signal sequence for cellular secretion of the **polypeptide**, in association with retroviral structural **proteins**;

(9) an ex vivo producer cell, comprising a nucleic acid construct expressing retroviral structural **proteins** and also comprises a retroviral vector comprising a promoter, a nucleic acid encoding (I) and a signal sequence for cellular secretion of the **polypeptide**, the cells package the vector in the structural **proteins** to produce recombinant retroviral particles;

(10) a nucleic acid having at least 80 % identity to a sequence encoding one of 16 amino acid sequences, all fully defined in the specification, and corresponding to (I), respectively, or to the full length coding sequence of one of 16 polynucleotide sequences, all fully defined in the specification, and encoding (I), respectively;

(11) a nucleic acid having at least 80 % identity to the full length coding sequence of the DNA deposited as ATCC accession number 209776, 209370, 209436, 209976, 209847, 209473, 209719 or 209858;

(12) a vector comprising the nucleic acid of (10) or (11);

(13) a host cell comprising the vector of (12);

(14) producing (I) comprising culturing the cell of (13) under expression conditions and recovering the **polypeptide** from the culture;

(15) a **polypeptide** having at least 80 % identity to one of 16 **polypeptide** sequences, all fully defined in the specification, and corresponding to (I), respectively, or to a sequence scoring at least 80 % positives when compared to them;

(16) a **polypeptide** having at least 80 % identity to a sequence encoded by the full-length coding sequence of DNA deposited as ATCC accession number 209776, 209370, 209436, 209976, 209847, 209473, 209719 or 209858;

(17) a **chimeric** molecule comprising the **polypeptide** of (15) or (16), fused to a **heterologous** amino acid **sequence**;

(18) an antibody specific for the **polypeptide** of (15) or (16);

(19) a nucleic acid encoding one of 16 amino acid sequences, all fully defined in the specification, but lacking its signal sequence, or encoding its extracellular domain, optionally with the signal sequence;

(20) a **polypeptide** encoded by the nucleic acid of (19); and

(21) a cardiovascular, endothelial, or angiogenic disorder diagnostic kit, comprising a (I)-specific antibody and a carrier.

ACTIVITY - Cardiant; Cytostatic; Tranquilizer; Vulnerary; Ophthalmological. Ventricular myocytes freshly isolated from adult Harlan Sprague Dawley rats were plated at 2000/well in 180 micro l volume assay media containing M199 (modified)-glutamine free, NaHCO3 phenol red, supplemented with 100 mM insulin, 0.2 % bovine serum **albumin**, 5 mM creatine, 2 mM L-carnitine, 5 mM taurine, 100 U/ml penicillin G, 100 micro g/ml streptomycin (CCT medium). On day two test samples (20 micro l) containing the test PRO **polypeptide** were added. On day five the cells were fixed and stained. Cells were scored as 0 no inhibition, -1 small inhibition, -2 large inhibition. PRO878 **polypeptide** had a score of less than 0 in the assay, which indicates inhibition of heart adult hypertrophy.

MECHANISM OF ACTION - (I) agonist or antagonist; (I) expression inhibitor; gene therapy.

USE - Mutations in (I)-encoding nucleic acids can be used to diagnose a disease or susceptibility to a disease related to mutations in (I). Cardiovascular, endothelial or angiogenic disorders in a mammal, can be diagnosed by analyzing the expression of a gene encoding (I), by detecting (I) in a test sample of tissue cells, or by contacting a (I)-specific antibody with tissue cells and detecting complex formation. (I) or its agonist or antagonist can be used to treat cardiovascular, endothelial or angiogenic disorders, in mammals, especially in a human who has suffered a myocardial infarction, or has cardiac hypertrophy characterized by elevated PGF2 alpha (undefined) levels, trauma, cancer or age-related macular degeneration. All claimed.

Dwg.0/32

L17 ANSWER 6 OF 11 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2000-611443 [58] WPIDS
DNN N2000-452816 DNC C2000-182929
TI Novel PRO **polypeptides** and polynucleotides used in detection methods, to target bioactive molecules to specific cells, and to modulate cellular activities.
DC B04 D16 K08 S03
IN ASHKENAZI, A J; BAKER, K P; BOTSTEIN, D; DESNOYERS, L; EATON, D L; FERRARA, N; FILVAROFF, E; FONG, S; GAO, W; GERBER, H; GERRITSEN, M E; GODDARD, A; GODOWSKI, P J; GRIMALDI, C J; GURNEY, A L; HILLAN, K J; KLJAVIN, I J; KUO, S S; NAPIER, M A; PAN, J; PAONI, N F; ROY, M A; SHELTON, D L; STEWART, T A; TUMAS, D; WILLIAMS, P M; WOOD, W I
PA (GETH) GENENTECH INC
CYC 90

PI WO 2000053756 A2 20000914 (200058)* EN 634p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000028836 A 20000928 (200067)

ADT WO 2000053756 A2 WO 2000-US4341 20000218; AU 2000028836 A AU 2000-28836 20000218

FDT AU 2000028836 A Based on WO 200053756

PRAI WO 2000-US376 20000106; WO 1999-US5028 19990308; US 1999-123957P 19990312; US 1999-126773P 19990329; US 1999-130232P 19990421; US 1999-131445P 19990428; US 1999-134287P 19990514; US 1999-141037P 19990623; US 1999-145698P 19990726; US 1999-162506P 19991029; WO 1999-US28313 19991130; WO 1999-US28551 19991202; WO 1999-US28565 19991202; WO 1999-US30095 19991216; WO 1999-US31243 19991230; WO 1999-US31274 19991230; WO 2000-US219 20000105; WO 2000-US277 20000106

AB WO 200053756 A UPAB: 20001114

NOVELTY - A nucleic acid (I) comprising at least 80 % identity to a sequence encoding one of 94 amino acid sequences corresponding to secreted or transmembrane PRO **polypeptides**, to one of 94 polynucleotide sequences or to the full length coding sequence of the 94 polynucleotide sequences, is new. All sequences fully defined in the specification.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a nucleic acid (II) comprising at least 80 % identity to the full length coding sequence of one of 94 sequences deposited at the American tissue culture center (ATCC) as accession numbers e.g. 209791, 209786, 203242, 209866, and 209910, all 94 accession numbers are given in the specification;

(2) a vector (III) comprising (I) or (II);

(3) a host cell (IV) comprising (III);

(4) producing a PRO **polypeptide** comprising culturing (IV) under expression conditions, and recovering the **polypeptide**;

(5) a **polypeptide** (V) comprising at least 80 % identity to one of 94 amino acid sequences, all fully defined in the specification, and corresponding to secreted or transmembrane PRO **polypeptides**, at least 80 % identity to one of the 94 sequences of (1) deposited with the ATCC, or a sequence which scores at 80 % positives when compared to one of the 94 **polypeptide** sequences;

(6) a **chimeric** molecule (VI) comprising (V) fused to a **heterologous** amino acid **sequence**;

(7) an antibody (VII) specific for (V);

(8) a nucleic acid comprising (I) but lacking the region encoding the signal **peptide**, or comprising the fragment of (I) encoding the extracellular **peptide** domain, and optionally lacking the sequence encoding the signal **peptide**;

(9) detecting PRO 337 or PRO 4993 in a sample, comprising contacting the sample with a PRO 4993 or PRO 337 **polypeptide** respectively, and determining conjugate formation;

(10) detecting PRO 1559 or PRO 725, PRO 700 or PRO 739 in a sample, comprising contacting the sample with a PRO 725, PRO 700 or PRO 739, or PRO 1559, respectively, and determining conjugate formation;

(11) linking a bioactive molecule to a cell expressing a PRO 337, or PRO 4993 **polypeptide**, comprising contacting the cell with a PRO 4993 or PRO 337 molecule, respectively, bound to a bioactive molecule, and allowing PRO 337 and PRO 4993 to bind each other;

(12) linking a bioactive molecule to a cell expressing PRO 1559, or

one of the **polypeptides** PRO 725, PRO 700 or PRO 739, comprising contacting the cell with a PRO 725, PRO 700 or PRO 739, or PRO 1559 molecule, respectively, bound to a bioactive molecule, and allowing PRO 1559 and PRO 725, PRO 700 or PRO 739 to bind each other;

(13) modulating at least one biological activity of a cell expressing a PRO 337 or PRO 4993 **polypeptide**, comprising contacting the cell with a PRO 4993 **polypeptide** or anti-PRO 3337 antibody, or a PRO 337 or anti-PRO 4993 antibody, respectively; and

(14) modulating at least one biological activity of a cell expressing a PRO 1559 or PRO 725, PRO 700 or PRO 739 **polypeptide**, comprising contacting the cell with a PRO 725, PRO 700, or PRO 739 **polypeptide** or anti-PRO 1559 antibody, or a PRO 1559 **polypeptide** or anti-PRO 725, anti-PRO 700 or anti-PRO 739 antibody, respectively.

ACTIVITY - Cytostatic. Human venous umbilical vein endothelial cells were plated on a 96-well microtiter plate, in 10 % serum (CSG medium, Cell Systems), at 2x104 cells/well in a total volume of 100 micro l. On day 2, test samples containing the PRO **polypeptide** were added in triplicate at dilutions of 1, 0.33 and 0.11 %. As a positive control 1:3 serial dilutions of 50 micro l 3x staurosporine stock were used. The ability of the PRO **polypeptides** to induce apoptosis was assessed processing the wells for detecting annexin V in the samples. 0.2 ml annexin V -biotin stock solution (100 micro g/ml) was diluted in 4.6 ml 2x Ca2+ binding buffer and 2.5 % bovine serum **albumin** (BSA) (1:25 dilution). 50 micro l of the diluted annexin V-biotin solution was added to each well to a final concentration of 1.0 micro g/ml. The samples were incubated for 10-15 minutes with annexin -biotin prior to direct addition of 35S-streptavidin. 35S-streptavidin was diluted in 2x Ca2+ binding buffer, 2.5 % BSA and added to the wells at a final concentration of 3x104cpm (counts per minute)/well. The plates were sealed, centrifuged at 1000 revolutions per minute for 15 minutes and placed on an orbital shaker for 2 hours. The analysis was performed on a 1450 Microbeta Trilux (Wallac). PRO 719 tested positive for apoptosis in the test, having a cpm at least 30 % higher than the negative controls, exact result not given.

MECHANISM OF ACTION - None given.

USE - For detecting the presence of PRO 4993, PRO 337, PRO 1559, PRO 725, PRO 700, or PRO 739 **polypeptide** in samples, for linking bioactive molecules to cells and for modulating biological activities of cells, using the **polypeptides** for specific targeting (Claimed). The **polypeptide** targeting can be used to kill the target cells (claimed), e.g. for the treatment of cancers.

ADVANTAGE - The **polypeptide** pairs provide specific targeting of bioactive molecules to cells.

Dwg.0/236

L17 ANSWER 7 OF 11 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2000-365608 [31] WPIDS
DNN N2000-273558 DNC C2000-110470
TI Production of cloned and transgenic mammals by introducing a somatic cell genome into a mature enucleated oocyte which is useful for recombinant production of biomedical **proteins** in milk.
DC B04 C06 D16 P14
IN BEHBODI, E; ECHELARD, Y; GAVIN, W; MELICAN, D; ZIOMEK, C
PA (GENZ) GENZYME TRANSGENIC CORP; (GENZ) GENZYME TRANSGENICS CORP
CYC 90
PI WO 2000026357 A2 20000511 (200031)* EN 105p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS

LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
AU 2000014622 A 20000522 (200040)
EP 1127113 A2 20010829 (200150) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
ADT WO 2000026357 A2 WO 1999-US25710 19991102; AU 2000014622 A AU 2000-14622 19991102; EP 1127113 A2 EP 1999-971451 19991102, WO 1999-US25710 19991102
FDT AU 2000014622 A Based on WO 200026357; EP 1127113 A2 Based on WO 200026357
PRAI US 1999-131328P 19990426; US 1998-106728P 19981102; US 1999-298508 19990422; US 1999-298971 19990423
AB WO 200026357 A UPAB: 20000630
NOVELTY - A method of producing a cloned or transgenic mammal comprises maintaining a mammalian reconstructed embryo, where the genome is derived from a somatic cell, in culture until the embryo is in the 2-8 cell stage, transferring the embryo at the 2-8 cell stage into a recipient mammal and allowing the reconstructed embryo to develop into a (transgenic) mammal.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a purified embryonic or fetal caprine somatic cell comprising a transgene where the cell is obtained from an embryonic or fetal goat derived from a germ cell obtained from a transgenic goat;

(2) a method of preparing a transgenic embryonic or fetal caprine somatic cell line;

(3) producing a cloned or transgenic non-human mammal comprising:

(i) introducing a genome from a non-human mammalian somatic cell into a naturally matured oocyte which is in a telophase stage of meiotic cell division to form a reconstructed embryo; and

(ii) allowing the reconstructed embryo to develop into a mammal, to produce a non-human mammal; and

(4) a cloned or transgenic non-human mammal, or descendant, obtained by a method as above.

USE - The transgenic or cloned non-human mammals, preferably goats, are useful for production of products in milk. Targeting expression of biomedical **proteins** to the mammary gland of large farm animals is useful for the low-cost production of high quantities of valuable therapeutic **proteins**.

Dwg.0/0

L17 ANSWER 8 OF 11 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1997-283102 [26] WPIDS
DNC C1997-091167
TI Furin analogue **fusion proteins** - for converting pro-**proteins** to mature **proteins** by proteolytic cleavage.
DC B04 D16
IN DORNER, F; EIBL, J; FALKNER, F; FISCHER, B; SCHLOKAT, U
PA (IMMO) IMMUNO AG; (BAXT) BAXTER AG
CYC 18
PI EP 775750 A2 19970528 (199726)* DE 64p
R: AT BE CH DE DK ES FI FR GB IT LI NL PT SE
NO 9604963 A 19970526 (199731)
JP 09183800 A 19970715 (199738) 162p
CA 2191053 A 19970525 (199739)
AT 9501928 A 19980715 (199833)
AT 404838 B 19990115 (199908)
US 6210929 B1 20010403 (200120)
ADT EP 775750 A2 EP 1996-890171 19961119; NO 9604963 A NO 1996-4963 19961122; JP 09183800 A JP 1996-353126 19961125; CA 2191053 A CA 1996-2191053 19961122; AT 9501928 A AT 1995-1928 19951124; AT 404838 B AT 1995-1928 19951124; US 6210929 B1 US 1996-753247 19961122

FDT AT 404838 B Previous Publ. AT 9501928
PRAI AT 1995-1928 19951124
AB EP 775750 A UPAB: 19970626
A new **fusion protein** (A) comprises an optionally C-terminally deleted furin (PACE) derivative or a derivative of a furin analogue, fused to a **heterologous sequence**. Also claimed are: (1) a DNA sequence (I) encoding (A); (2) an expression vector containing (I); (3) transformed cells containing the expression vector; and (4) a complex comprising (A) adsorbed on a solid support.
USE - (A) is used in a process for converting pro-**proteins** to **proteins** in which the pro-**protein** is proteolytically cleaved by (A), especially where the **protein** is a plasma **protein** (preferably factor IX, von Willebrand factor (vWF), factor VII, factor X, factor XI, factor V, **protein** C, **protein** S or **albumin**) or a viral **protein** (preferably HIV gp160 or influenza virus HA **protein**). (All claimed).
ADVANTAGE - The **heterologous sequence** can be selected to facilitate immobilisation of (A) on a solid phase.
Dwg.0/10

L17 ANSWER 9 OF 11 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1990-067177 [09] WPIDS
DNC C1990-029393
TI New secretory leader **sequences** - useful in secreting **heterologous polypeptide**(s) in yeast.
DC B04 D16
IN BELFIELD, G P; GOODEY, A R; SLEEP, D
PA (DELZ) DELTA BIOTECHNOLOGY LTD
CYC 21
PI WO 9001063 A 19900208 (199009)* EN 40p
RW: AT BE CH DE FR GB IT LI LU NL SE
W: AU DK FI HU JP KR US
FI 9001428 A 19900321 (199027)
AU 8940427 A 19900219 (199030)
DK 9000729 A 19900321 (199031)
ZA 8905536 A 19900725 (199034)
EP 387319 A 19900919 (199038)
R: AT BE CH DE FR GB IT LI LU NL SE
GB 2230268 A 19901017 (199042)
JP 03500370 W 19910131 (199111)#
GB 2230268 B 19920129 (199205)
HU 57829 T 19911230 (199206)
AU 633020 B 19930121 (199310)
US 5302697 A 19940412 (199414) 13p
IL 91024 A 19950831 (199543)
EP 387319 B1 19960306 (199614) EN 26p
R: AT BE CH DE FR GB IT LI LU NL SE
DE 68925893 E 19960411 (199620)
HU 213571 B 19970828 (199811)
CA 1340547 C 19990518 (199938) EN
FI 104564 B1 20000229 (200017)
JP 3092811 B2 20000925 (200051) 14p
ADT WO 9001063 A WO 1989-GB816 19890714; ZA 8905536 A ZA 1989-5536 19890720; EP 387319 A EP 1989-909015 19890714; GB 2230268 A GB 1989-28849 19891221; JP 03500370 W JP 1989-508293 19890714; AU 633020 B AU 1989-40427 19890714; US 5302697 A Cont of US 1990-460165 19900313, US 1993-67243 19930521; IL 91024 A IL 1989-91024 19890718; EP 387319 B1 EP 1989-909015 19890714, WO 1989-GB816 19890714; DE 68925893 E DE 1989-625893 19890714, EP 1989-909015 19890714, WO 1989-GB816 19890714; HU 213571 B HU 1989-4572 19890714, WO

1989-GB816 19890714; CA 1340547 C CA 1989-605832 19890717; FI 104564 B1 WO 1989-GB816 19890714, FI 1990-1428 19900321; JP 3092811 B2 JP 1989-508293 19890714, WO 1989-GB816 19890714

FDT AU 633020 B Previous Publ. AU 8940427, Based on WO 9001063; EP 387319 B1 Based on WO 9001063; DE 68925893 E Based on EP 387319, Based on WO 9001063; HU 213571 B Previous Publ. HU 57829, Based on WO 9001063; FI 104564 B1 Previous Publ. FI 9001428; JP 3092811 B2 Previous Publ. JP 03500370, Based on WO 9001063

PRAI GB 1989-6920 19890328; GB 1988-17598 19880723; GB 1989-28849 19891221; JP 1989-508293 19890714

AB WO 9001063 A UPAB: 19960417

Amino acid sequences (I) and (II) or conservatively modified variants are new: H2N-Met-Lys-Trp-Val-Ser-Phe-Ile -Ser-Leu-Leu-Phe-Leu-Phe-Ser-Ser-Ala-Tyr -Ser-Arg-Ser-Leu -Asp-Lys-Arg-COOH (I). H2N-Mwt-Asn-Ile-Phe-Tyr-Ile-Phe-Leu -Phe-Leu-Leu-Ser-Phe-Val-Gln-Gly-Ser-Leu -Asp-Lys-Arg-COOH (II) Also new are: (1) a **fusion** cpd. of (I), (II) or variants linked at the C-terminal to the N-terminal of a **polypeptide**; (2) nucleotide sequencies encoding (I), (II) or variants, or for the **fusion** cpd; (3) a DNA construct contg. a suitable control region(s) and a nucleotide sequence as in (2); (4) a host transformed with the DNA construct; and (5) a production of a **polypeptide** using the transformed host.

USE - (I) and (II) are secretory leader sequences for use in directing secretion of heterologous **polypeptides** such as human serum **albumin** (HSA) from fungi such as yeast.

1,2,0/6

Dwg.1,2,0/6

L17 ANSWER 10 OF 11 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1989-159382 [22] WPIDS

CR 1989-150783 [20]

DNN N1989-121538 DNC C1989-070746

TI Transgenic plants contg. **protein** of high nutritional value - obtd. by inserting gene for 2S **albumin** modified for enrichment of specific aminoacid(s).

DC D16 P13

IN BARRETO, DE CASTRO L; DE, CLERCQ A; GANDER, E; KREBBERS, E; VAN, MONTAGU M; VANDERKERCKHOVE, J; VANDEKERCKHOVE, J S; VANDEKERCKHOVE, J

PA (EMBR-N) EMBRAPA EMPRESA BRASIL PESQUISA; (PLBZ) PLANT GENETIC SYSTEMS NV; (EMPR-N) EMPRESA BRASIL PESQUISA AGROPECUARIA; (EMBR-N) EMBRACO EMPRESA BRASILEIRA PESQUISO AGRO; (PLBZ) PLANT GENETIC SYSTTEMS NV; (EMBR-N) EMBRAPA EMPRESA BRASILEIRA PESQUISO AGRO; (EMBR-N) EMBRAPA/CENARGEN BRAZILIAN AGRIC RES ORG

CYC 17

PI EP 318341 A 19890531 (198922)* EN 31p
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
W: AU JP US
CA 2000661 A 19900414 (199019)
WO 9004032 A 19900419 (199019)
W: AU JP US
AU 8944951 A 19900501 (199029)
JP 03502644 W 19910620 (199131)
AU 634987 B 19930311 (199317)
EP 318341 B1 19960731 (199635) EN 30p
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
DE 3855455 G 19960905 (199641)
US 5589615 A 19961231 (199707) 32p
CA 2000661 C 19990413 (199933)
JP 2947843 B2 19990913 (199943) 39p

ADT EP 318341 A EP 1988-402650 19881020; AU 634987 B AU 1989-44951 19891013;

EP 318341 B1 EP 1988-402650 19881020; DE 3855455 G DE 1988-3855455 19881020, EP 1988-402650 19881020; US 5589615 A Cont of US 1990-499386 19900809, Cont of US 1993-47538 19930419, US 1994-229069 19940418; CA 2000661 C CA 1989-2000661 19891013; JP 2947843 B2 JP 1989-511357 19891013, WO 1989-EP1229 19891013

FDT AU 634987 B Previous Publ. AU 8944951, Based on WO 9004032; DE 3855455 G Based on EP 318341; JP 2947843 B2 Previous Publ. JP 03502644, Based on WO 9004032

PRAI EP 1988-402611 19881014; EP 1987-402348 19871020; EP 1988-402650 19881020

AB EP 318341 A UPAB: 19991020

Prodn. of transgenic plants of increased nutritional value comprises cultivating plants, obtd. over 1 or more generations, from regenerated plant cells (or seeds) which include a nucleic acid (I) encoding a modified form of a natural 25 **albumin** storage **protein**, under control of a promoter.

(I) (a) encodes at least part of the 25 **albumin** precursor, including its signal **peptide** (or that of another 25 **albumin**); (b) includes a nucleotide sequence contg. a non essential region of 25 modified by a heterologous amino acid insert or substitution, the modification providing an opne-reading frame with the surrounding unmodified regions; and (c) the specified insert/substitution encodes a **polypeptide** including sufficient of at least one of Lys, Met, Try, Thr, Phe, Leu, Val, Ile and Arg to provide a product enriched in these amino acids relative to natural 25 **albumin**. Also new is recombinant DNA encoding the modified **protein**, esp. in the form of a plasmid.

ADVANTAGE - The modified **proteins** are expressed at high levels, without (by proper choice of the site of modification) any alteration to correct expression, processing and transport.

Dwg.0/10

L17 ANSWER 11 OF 11 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1989-150783 [20] WPIDS

CR 1989-159382 [22]

DNN N1989-115158 DNC C1989-066792

TI Recombinant DNA expression in plants - using modified storage **protein** genes for expressing heterologous **polypeptide**(s) in the seeds.

DC C03 D16 P13

IN BOTTERMAN, J; KREBBERS, E; LEEMANS, J; VANDEKERCKHOVE, J S

PA (PLBZ) PLANT GENETIC SYSTEMS NV; (EMBR-N) EMBRAPA/CENARGEN BRAZILIAN AGRIC RES ORG; (PLBZ) PLANT GENETIC SYSTEMS

CYC 17

PI WO 8903887 A 19890505 (198920)* EN 121p
W: AU JP US
EP 319353 A 19890607 (198923) EN
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
AU 8928118 A 19890523 (198939)
JP 02501802 W 19900621 (199031)
CA 1337048 C 19950919 (199544)#
US 5487991 A 19960130 (199611) 46p
EP 723019 A1 19960724 (199634) EN 53p
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
EP 319353 B1 19961002 (199644) EN 56p
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
DE 3855591 G 19961107 (199650)
US 5623067 A 19970422 (199722)
JP 3026985 B2 20000327 (200020) 49p
JP 2000106890 A 20000418 (200030) 35p

JP 3232068 B2 20011126 (200201) 36p

ADT WO 8903887 A WO 1988-EP944 19881020; EP 319353 A EP 1988-402646 19881020; CA 1337048 C CA 1988-581160 19881025; US 5487991 A Cont of US 1989-363898 19890802, US 1993-45773 19930414; EP 723019 A1 Div ex EP 1988-402646 19881020, EP 1996-100523 19881020; EP 319353 B1 EP 1988-402646 19881020; DE 3855591 G DE 1988-3855591 19881020, EP 1988-402646 19881020; US 5623067 A Cont of US 1989-363898 19890802, Div ex US 1993-45773 19930414, US 1995-459942 19950602; JP 3026985 B2 WO 1988-EP944 19881020, JP 1989-500933 19881020; JP 2000106890 A Div ex JP 1989-500933 19881020, JP 1999-267978 19881020; JP 3232068 B2 Div ex JP 1989-500933 19881020, JP 1999-267978 19881020

FDT DE 3855591 G Based on EP 319353; US 5623067 A Div ex US 5487991; JP 3026985 B2 Previous Publ. JP 02501802, Based on WO 8903887; JP 3232068 B2 Previous Publ. JP 2000106890

PRAI EP 1987-402348 19871020; EP 1988-402646 19881020; CA 1988-581160 19881025

AB WO 8903887 A UPAB: 20020105

A recombinant DNA is claimed which includes a nucelic acid sequence which can be transcribed into the mRNA encoding at least part of the precursor of a storage **protein** including the signal **peptide** of a plant. The nucleic acid (precursor-coding nucleic acid) is characterised in that (a) it contains a nucleotide sequence (relevant sequence) which comprises a non-essential region modified by a heteroloous nucleic acid insert forminq an open-readinq frame in reading phase with the non modified parts surrounding the insert in the relevant sequence, (b) the insert includes a nucleotide seqment encoding a **polypeptide** of interest, (c) the heterologous nucleotide segment is linked to the adjacent extremities of the surrounding non modified parts of the relevant sequence by one or several codons whose nucleotides belong either to the insert or to the adjacent extremities or both and (d) the one or several codons encode one or several amino acid residues which define selectively cleavable border sites surrounding the **peptide** of interest in the hybrid storage **protein** or storage **protein** subunit encoded by the modified relevant sequence.

USE/ADVANTAGE - The recombinant DNA is inserted into plants which are then cultured. The recombinant sequence can be expressed at high levels only or mostly in the seed forming staqe of the cultivated plants and, accordinqly, the hybrid **protein** produced mostly in the seeds.

Dwg.0/24

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=> d his

     (FILE 'MEDLINE' ENTERED AT 13:32:00 ON 11 FEB 2002)
                DEL HIS Y
L1         38210 S CHIMERIC PROTEINS+NT/CT OR RECOMBINANT FUSION PROTEINS/CT
                E ALBUMIN/CT
                E E12+ALL
L2         77426 S ALBUMINS+NT/CT
L3           308 S L2 AND L1
                E ANGIOSTATIN/CT
                E ENDOSTATIN/CT
L4             0 S ANGIOGENESIS INIHIBITING PROTEINS/CT
                E ANGIOGENESIS INIHIBITING PROTEINS/CT
L5         11492 S ANGIOGENESIS OR ENDOSTATIN# OR AGIONSTATIN#
L6             2 S L5 AND L3
L7         38128 S HETEROLOGOUS
L8           477 S L7 (3A) SEQUENCE#
L9             0 S L8 AND L3
L10           10 S L7 AND L3
L11            0 S L10 AND SEQUENCEE#
L12            5 S L10 AND SEQUENCE#

=> d .med l6 1-2;d .med l12 1-5

L6   ANSWER 1 OF 2     MEDLINE
AN   96181660     MEDLINE
DN   96181660   PubMed ID: 8603739
TI   Blockage of urokinase receptor reduces in vitro the motility and the
     deformability of endothelial cells.
AU   Lu H; Mabilat C; Yeh P; Guitton J D; Li H; Pouchelet M; Shoevaert D;
     Legrand Y; Soria J; Soria C
CS   INSERM U353, Hopital St. Louis, Paris, France.
SO   FEBS LETTERS, (1996 Feb 12) 380 (1-2) 21-4.
     Journal code: EUH; 0155157. ISSN: 0014-5793.
CY   Netherlands
DT   Journal; Article; (JOURNAL ARTICLE)
LA   English
FS   Priority Journals
EM   199605
ED   Entered STN: 19960524
     Last Updated on STN: 20000303
     Entered Medline: 19960515
AB   The binding of urokinase (u-PA) to its cell surface receptor (u-PAR) is
     critical for tumor cell invasion. Here, we report that the distribution of
     this binding by a u-PAR antagonist ATF-HSA inhibits in vitro the motility
     of endothelial cells in a dose-dependent manner. This inhibition was also
     observed when the cells were first stimulated with potent angiogenic
     factors, including bFGF or VEGF. [3H]thymidine incorporation assay
     demonstrated that ATF-HSA did not affect the cell proliferation. ATF-HSA
     was more potent than plasmin inhibitors, suggesting that it exerts its
     effects not solely by inhibiting the remodeling of the extracellular
     matrix. In fact, analysis of the cell shape change during migration
     revealed for the first time that its effect is related to a decrease in
     cell deformability. These results suggest that u-PAR antagonist may be a
     new approach to control angiogenesis.
CT   Check Tags: Human; Support, Non-U.S. Gov't
      Aprotinin: PD, pharmacology
      Cell Division
      Cell Movement: DE, drug effects
     *Cell Movement: PH, physiology
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Cell Size
Chimeric Proteins
Endothelial Growth Factors: PD, pharmacology
*Endothelium, Vascular: CY, cytology
Enzyme Inhibitors: PD, pharmacology
Fibroblast Growth Factor, Basic: PD, pharmacology
Lymphokines: PD, pharmacology
Peptide Fragments
Plasmin: AI, antagonists & inhibitors
Receptors, Cell Surface: AI, antagonists & inhibitors
*Receptors, Cell Surface: PH, physiology
Serum Albumin
Umbilical Veins
*Urinary Plasminogen Activator: PH, physiology

L6 ANSWER 2 OF 2 MEDLINE
AN 95080428 MEDLINE
DN 95080428 PubMed ID: 7988721
TI Blockage of the urokinase receptor on the cell surface: construction and characterization of a hybrid protein consisting of the N-terminal fragment of human urokinase and human albumin.
AU Lu H; Yeh P; Guitton J D; Mabilat C; Desanlis F; Maury I; Legrand Y; Soria J; Soria C
CS Unite INSERM 353, Hopital St. Louis, Paris, France.
SO FEBS LETTERS, (1994 Dec 12) 356 (1) 56-9.
Journal code: EUH; 0155157. ISSN: 0014-5793.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199501
ED Entered STN: 19950124
Last Updated on STN: 20000303
Entered Medline: 19950111
AB Receptor-bound urokinase is likely to be a crucial determinant in both tumor invasion and **angiogenesis**. We report here that a yeast-derived genetic conjugate between human serum albumin and the 1-135 N-terminal residues of urokinase (u-PA) competitively inhibits the binding of exogenous and endogenous u-PA to its cell-anchored receptor (u-PAR). This hybrid molecule (ATF-HSA) also inhibits in vitro pro-urokinase-dependent plasminogen activation in the presence of u-PAR bearing cells. These effects are probably responsible for the observed in vitro inhibition of tumor cell invasion in a reconstituted basement membrane extract (Matrigel).
CT Check Tags: Human; Support, Non-U.S. Gov't
Cell Line
Cloning, Molecular
Kluyveromyces: GE, genetics
Peptide Fragments: GE, genetics
Peptide Fragments: PD, pharmacology
*Plasminogen: AI, antagonists & inhibitors
*Receptors, Cell Surface: AI, antagonists & inhibitors
Recombinant Fusion Proteins: PD, pharmacology
Saccharomyces cerevisiae: GE, genetics
Serum Albumin: GE, genetics
***Serum Albumin: PD, pharmacology**
Tumor Cells, Cultured
Urinary Plasminogen Activator: GE, genetics
*Urinary Plasminogen Activator: PD, pharmacology

L12 ANSWER 1 OF 5 MEDLINE
AN 2000063614 MEDLINE
DN 20063614 PubMed ID: 10594975
TI Introduction of protein or DNA delivered via recombinant Salmonella typhimurium into the major histocompatibility complex class I presentation pathway of macrophages.
AU Catic A; Dietrich G; Gentschev I; Goebel W; Kaufmann S H; Hess J
CS Department of Immunology, University Clinics Ulm, D-89070 Ulm, Germany.
SO Microbes Infect, (1999 Feb) 1 (2) 113-21.
Journal code: DJ1; 100883508. ISSN: 1286-4579.
CY France
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200007
ED Entered STN: 20000810
Last Updated on STN: 20000810
Entered Medline: 20000727
AB Recombinant (r) Salmonella typhimurium aroA strains which display the hen egg ovalbumin OVA(257-264) peptide SIINFEKL in secreted form were constructed. In addition, attenuated rS. typhimurium pcDNA-OVA constructs harbouring a eukaryotic expression plasmid encoding complete OVA were used to introduce the immunodominant OVA(257-264) epitope into the major histocompatibility complex (MHC) class I presentation pathway. Both modes of antigen delivery (DNA and protein) by Salmonella vaccine carriers stimulated OVA(257-264)-specific CD8 T-cell hybridomas. An in vitro infection system was established that allowed both rSalmonella carrier devices to facilitate MHC class I delivery of OVA(257-264) by coexpression of listeriolysin (Hly) or by coinfection with rS. typhimurium Hlys (Hess J., Gentschev I., Miko D., Welzel M., Ladel C., Goebel W., Kaufmann S.H.E., Proc. Natl. Acad. Sci. USA 93 (1996) 1458-1463). Coexpression of Hly and coinfection with rS. typhimurium Hlys slightly improved MHC class I processing of OVA. Our data provide further evidence for the feasibility of attenuated, Hly-expressing rS. typhimurium carriers secreting **heterologous** antigens or harbouring **heterologous** DNA as effective vaccines for stimulating CD8 T cells in addition to CD4 T cells.
CT Check Tags: Animal; Support, Non-U.S. Gov't
Amino Acid Sequence
*Antigen Presentation
Base Sequence
Blotting, Western
Cells, Cultured
Epitopes: GE, genetics
Epitopes: IM, immunology
Genes, MHC Class I: IM, immunology
Genetic Vectors
Heat-Shock Proteins: GE, genetics
Heat-Shock Proteins: ME, metabolism
*Macrophages: IM, immunology
Macrophages: MI, microbiology
Mice
Mice, Inbred C57BL
***Ovalbumin: GE, genetics**
Ovalbumin: IM, immunology
Recombinant Fusion Proteins: IM, immunology
*Salmonella typhimurium: GE, genetics
*Transformation, Bacterial

Vaccines, DNA

L12 ANSWER 2 OF 5 MEDLINE
AN 96057069 MEDLINE
DN 96057069 PubMed ID: 8528143
TI Modulation of transcriptional activity of the chicken ovalbumin gene promoter in primary cultures of chicken oviduct cells: effects of putative regulatory elements in the 5'-flanking region.
AU Park H M; Okumura J; Muramatsu T
CS Laboratory of Animal Nutrition, School of Agricultural Sciences, Nagoya University, Japan.
SO BIOCHEMISTRY AND MOLECULAR BIOLOGY INTERNATIONAL, (1995 Jul) 36 (4) 811-6. Journal code: BOD; 9306673. ISSN: 1039-9712.
CY Australia
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199601
ED Entered STN: 19960220
Last Updated on STN: 19980206
Entered Medline: 19960129
AB With primary cultures of chicken oviduct cells, we tested functional roles in the ovalbumin gene transcription of NF-1 like factor binding element, half estrogen-response-element direct repeat, and chicken ovalbumin upstream promoter residing in the 5'-flanking region of the chicken ovalbumin gene. The three putative regulatory elements were fused upstream to the chloramphencol acetyltransferase reporter gene driven by the chicken ovalbumin gene promoters, and transient gene expression was measured in primary cultured oviduct cells. The results indicated that neither the NF1 binding element nor the ovalbumin upstream promoter showed any enhancer-like activity. In addition, although the half estrogen response element direct repeat enhanced transcriptional activity of the ovalbumin gene promoter, it completely deprived the ovalbumin promoter of estrogen dependency. We concluded, therefore, that the biological significance of these three putative regulatory elements in the homologous chicken oviduct cell system might be different from those previously reported in **heterologous** systems.
CT Check Tags: Animal
Base Sequence
Binding Sites
Cells, Cultured
Chickens
Chloramphenicol O-Acetyltransferase: BI, biosynthesis
Enhancer Elements (Genetics)
Genes, Regulator: GE, genetics
Molecular Sequence Data
Oligodeoxyribonucleotides
***Ovalbumin: BI, biosynthesis**
***Ovalbumin: GE, genetics**
*Oviducts: ME, metabolism
*Promoter Regions (Genetics)
Recombinant Fusion Proteins: BI, biosynthesis
***Regulatory Sequences, Nucleic Acid**
Repetitive Sequences, Nucleic Acid
Transcription Factors
*Transcription, Genetic
Transfection

L12 ANSWER 3 OF 5 MEDLINE
AN 95281572 MEDLINE

DN 95281572 PubMed ID: 7761429
TI Complete reconstitution of mouse liver with xenogeneic hepatocytes.
AU Rhim J A; Sandgren E P; Palmiter R D; Brinster R L
CS Department of Animal Biology, School of Veterinary Medicine, University of Pennsylvania, Philadelphia 19104, USA.
NC CA-38635 (NCI)
HD-09172 (NICHD)
HD-23657 (NICHD)
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1995 May 23) 92 (11) 4942-6.
Journal code: PV3; 7505876. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199506
ED Entered STN: 19950707
Last Updated on STN: 20000303
Entered Medline: 19950629
AB We have developed a system for studying hepatocellular growth potential in which liver cells are introduced into the diseased livers of albumin-urokinase (Alb-uPA) transgenic mice. To use this system to study xenogeneic cell transplantation, rat liver cells were introduced into immunotolerant Alb-uPA transgenic mice. In regenerated recipient livers, up to 100% of hepatocellular gene expression was of rat origin, demonstrating the creation of a functional mouse liver in which parenchyma is derived from xenogeneic (rat) hepatocytes. Immunotolerant Alb-uPA transgenic mice provide a tool for studying hepatocellular biology of any species, including humans, in a controlled experimental setting.
CT Check Tags: Animal; Comparative Study; Female; Male; Support, U.S. Gov't, P.H.S.
Base Sequence
*Cell Transplantation
Chimeric Proteins: BI, biosynthesis
DNA: AN, analysis
Immunohistochemistry
*Liver: CY, cytology
Liver: PH, physiology
*Liver Regeneration
Mice
Mice, Nude
Mice, Transgenic
Molecular Sequence Data
Oligonucleotide Probes
RNA, Messenger: AN, analysis
Rats
Rats, Sprague-Dawley
Serum Albumin: BI, biosynthesis
Serum Albumin: GE, genetics
Transferrin: AN, analysis
Transferrin: BI, biosynthesis
***Transplantation, Heterologous**
Urinary Plasminogen Activator: BI, biosynthesis
Urinary Plasminogen Activator: GE, genetics

L12 ANSWER 4 OF 5 MEDLINE
AN 90329241 MEDLINE
DN 90329241 PubMed ID: 1366511
TI The secretion of human serum albumin from the yeast Saccharomyces cerevisiae using five different leader **sequences**.

AU Sleep D; Belfield G P; Goodey A R
CS Delta Biotechnology Limited, Nottingham, Great Britain.
SO BIO/TECHNOLOGY, (1990 Jan) 8 (1) 42-6.
Journal code: AL1; 8309273. ISSN: 0733-222X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS B
EM 199009
ED Entered STN: 19950809
Last Updated on STN: 19950809
Entered Medline: 19900906
AB We demonstrate the secretion of human serum albumin into the culture supernatant from the yeast Saccharomyces cerevisiae. Studies with five KEX2 processed leader **sequences**, namely the S. cerevisiae alpha factor, the natural human serum albumin, the Kluyveromyces lactis killer, a natural human serum albumin/alpha factor fusion, and a Kluyveromyces lactis killer/alpha factor fusion leader, are described. We show that the leader **sequence** used to direct secretion influences the quantity and quality of the secreted product. In designing secretion systems for **heterologous** proteins, one aims to maximise both the yield and fidelity of the product. Our results indicate that the choice of leader **sequence** and its relationship to the structural protein under study are crucial to the success of this process.
CT Check Tags: Human
Amino Acid Sequence
Cloning, Molecular
Electrophoresis, Polyacrylamide Gel
Gene Expression
Genetic Vectors
Molecular Sequence Data
Plasmids
Protein Precursors: GE, genetics
*Protein Sorting Signals: GE, genetics
Protein Sorting Signals: ME, metabolism
Recombinant Fusion Proteins: BI, biosynthesis
Recombinant Fusion Proteins: GE, genetics
*Saccharomyces cerevisiae: GE, genetics
Saccharomyces cerevisiae: ME, metabolism
Serum Albumin: GE, genetics
***Serum Albumin: SE, secretion**
Transfection: GE, genetics

L12 ANSWER 5 OF 5 MEDLINE
AN 88233917 MEDLINE
DN 88233917 PubMed ID: 3375054
TI Identification of **sequences** responsible for acute-phase induction of human C-reactive protein.
AU Arcone R; Gualandi G; Ciliberto G
CS European Molecular Biology Laboratory, Heidelberg, FRG.
SO NUCLEIC ACIDS RESEARCH, (1988 Apr 25) 16 (8) 3195-207.
Journal code: O8L; 0411011. ISSN: 0305-1048.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198806
ED Entered STN: 19900308
Last Updated on STN: 19970203
Entered Medline: 19880630

AB Human C-Reactive protein (CRP) is inducible in liver cells during acute inflammation. Around 90 bp from the 5' flanking region of the human CRP gene contain, as shown here, information to induce the expression of a linked bacterial CAT gene specifically in human hepatoma (Hep3B) cells. The promoter is induced rapidly, faithfully and at high efficiency when transfected cells are exposed to conditioned medium from lipopolysaccharide stimulated peripheral monocytes. The **sequences** required for inducibility are located immediately upstream to the TATA element. A DNA segment from base -121 to -50 is capable of inducing transcription from the **heterologous** SV40 early promoter. Induction of CRP expression is probably exerted via the binding of at least one positive trans-acting factor.

CT Check Tags: Human; Support, Non-U.S. Gov't

Base Sequence
Biological Products: PD, pharmacology
C-Reactive Protein: BI, biosynthesis
***C-Reactive Protein: GE, genetics**
Cells, Cultured
Gene Expression Regulation: DE, drug effects
Leukocytes, Mononuclear: DE, drug effects
Leukocytes, Mononuclear: PH, physiology
Lipopolysaccharides: PD, pharmacology
Molecular Sequence Data
Monokines
*Promoter Regions (Genetics)
Recombinant Fusion Proteins: BI, biosynthesis
***Regulatory Sequences, Nucleic Acid**
Transcription, Genetic
Tumor Cells, Cultured: ME, metabolism

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L1         26599 S (FUSION OR CHIMER?) (4A) (PROTEIN# OR PEPTIDE# OR POLYPEPTIDE
L2         86681 S ALBUMIN
L3           161 S L1 AND L2
L4          1642 S ANGIOGENESIS INHIBIT? OR ANGIOSTATIN# OR ENDOSTATIN#
L5             0 S L3 AND L4
L6          6350 S HETEROLOGOUS AND SEQUENCE#
L7             2 S L6 AND L3
L8             1 S L3 AND ANGIOGEN?
L9             3 S L7 OR L8

     FILE 'BIOSIS' ENTERED AT 13:42:19 ON 11 FEB 2002

=> d bib ab it 1-3

L9   ANSWER 1 OF 3  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN   2001:314607  BIOSIS
DN   PREV200100314607
TI   Colocalization prostacyclin (PGI2) synthase-caveolin-1 in endothelial
     cells and new roles for PGI2 in angiogenesis.
AU   Spisni, Enzo; Griffoni, Cristiana; Santi, Spartaco; Riccio, Massimo;
     Marulli, Roberta; Bartolini, Giovanna; Toni, Mattia; Ullrich, Volker;
     Tomasi, Vittorio (1)
CS   (1) Department of Experimental Biology, University of Bologna, Via Selmi,
     3, 40126, Bologna: tomasi@alma.unibo.it Italy
SO   Experimental Cell Research, (May 15, 2001) Vol. 266, No. 1, pp. 31-43.
     print.
     ISSN: 0014-4827.
DT   Article
LA   English
SL   English
AB   In vascular cells, prostacyclin (PGI2) synthase (PGI2s) has been localized
     in the endoplasmic reticulum of endothelial cells and in the nuclear and
     plasma membrane of smooth muscle cells. In human umbilical vein
     endothelial (HUVE) cells, we detected the enzyme in abundant cytoplasmic
     vesicles apparently originating from the plasma membrane and similar to
     those stained by gold-albumin, which interacts with a caveolar
     receptor. This prompted us to try a direct confocal microscopy approach
     aimed at colocalizing gold-albumin, caveolin-1, and PGI2
     synthase. Moreover, the staining of HUVE cells with an anti-BiP7Grp78
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antibody (a marker of endoplasmic reticulum) shows a perinuclear localization, sharply separated from PGI2 synthase localization. The results indicate that more than 80% of the enzyme resides in cellular sites costaining with caveolin-1 antibody and gold-**albumin**. This evidence was confirmed by the demonstration that PGI2 synthase and caveolin-1 coimmunoprecipitate in HUVE cell lysates and that they are associated to detergent-insoluble membrane domains in the same low-density fractions of a sucrose gradient. In addition, depletion of cellular cholesterol by mevalonate and methyl-beta-cyclodextrin leads to the shift of PGI2 synthase and caveolin-1 to higher density fractions of the gradient. Biochemical evidence about colocalization was supported by the use of a **fusion protein** glutathione S-transferase (GST)/caveolin-1, which retained either PGI2s purified from ram seminal vesicles or PGI2s present in HUVE cell lysates. Binding of PGI2s to caveolin "scaffolding domain" and to C-terminal region was deduced by using full-length GST-Cav-1, GST-Cav 61-101, and GST C- and N-terminal **fusion proteins**. A double approach based on the usage of filipin as a specific caveolae-disrupting agent and antisense oligonucleotides targeting PGI2 synthase mRNA suggests that the production of PGI2 in caveolae is likely to be connected to the regulation of **angiogenesis**, at least in vitro.

IT Major Concepts
Enzymology (Biochemistry and Molecular Biophysics); Membranes (Cell Biology); Cardiovascular System (Transport and Circulation)

IT Parts, Structures, & Systems of Organisms
caveolae; endoplasmic reticulum; plasma membrane; umbilical vein endothelial cell: circulatory system

IT Chemicals & Biochemicals
caveolin-1; cholesterol; prostacyclin: synthesis; prostacyclin synthase

IT Methods & Equipment
confocal microscopy: analytical method

IT Miscellaneous Descriptors
angiogenesis

ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
human (Hominidae)

ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Primates; Vertebrates

RN 57-88-5 (CHOLESTEROL)
35121-78-9 (PROSTACYCLIN)
65802-86-0 (PROSTACYCLIN SYNTHASE)

L9 ANSWER 2 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1992:414679 BIOSIS
DN BA94:77879
TI EXPRESSION OF RECOMBINANT PROTEINS ON THE SURFACE OF THE COAGULASE-NEGATIVE BACTERIUM STAPHYLOCOCCUS-XYLOSUS.
AU HANSSON M; STAHL S; NGUYEN T N; BACHI T; ROBERT A; BINZ H; SJOLANDER A; UHLEN M
CS DEP. BIOCHEMISTRY BIOTECHNOLOGY, ROYAL INSTITUTE TECHNOLOGY, S-100 44 STOCKHOLM, SWED.
SO J BACTERIOL, (1992) 174 (13), 4239-4245.
CODEN: JOBAAY. ISSN: 0021-9193.
FS BA; OLD
LA English
AB An expression system to allow targeting of **heterologous** proteins to the cell surface of Staphylococcus xylosus, a coagulase-negative gram-positive bacterium, is described. The expression of recombinant gene fragments, fused between gene fragments encoding the signal peptide and

the cell surface-binding regions of staphylococcal **protein** A, targets the resulting **fusion proteins** to the outer bacterial cell surface via the membrane-anchoring region and the highly charged cell wall-spanning region of staphylococcal protein A. The expression system was used to secrete **fusion proteins** containing **sequences** from a malaria blood-stage antigen and a streptococcal **albumin**-binding receptor to the cell surface of S. xylosus. Analysis of the recombinant cells by immunogold staining and immunofluorescence revealed that both the receptor and the malaria peptide were properly processed and exposed on the surface of the host cells. However, only approximately 40 to 50% of the recombinant cells were strongly stained with antiserum reactive with the **albumin** -binding receptor, while approximately 10 to 15% of the cells were stained with antiserum reactive with the malaria peptide. The incomplete staining of some of the cells suggests steric effects that make the recombinant **fusion proteins** inaccessible to the reactive antibodies because of variable cell wall structures. However, the results demonstrate for the first time that recombinant techniques can be used to express **heterologous** receptors and immunogens on the surface of gram-positive cells.

IT Miscellaneous Descriptors
MALARIAL ANTIGEN STREPTOCOCCAL **ALBUMIN** RECEPTOR GENETICALLY ENGINEERED ORGANISM GENETICALLY ENGINEERED PRODUCT EXPRESSION SYSTEM PROTEIN A MEMBRANE ANCHORING REGION HIGHLY CHARGED CELL WALL SPANNING REGION ANTIBODY REACTIVITY **HETEROLOGOUS** RECEPTORS IMMUNOGENS BIOTECHNOLOGY METHOD

RN 9001-13-2 (COAGULASE)

L9 ANSWER 3 OF 3 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1989:362090 BIOSIS
DN BA88:54204
TI DUAL AFFINITY FUSION APPROACH AND ITS USE TO EXPRESS RECOMBINANT HUMAN INSULIN-LIKE GROWTH FACTOR II.
AU HAMMARBERG B; NYGREN P-A; HOLMGREN E; ELMBLAD A; TALLY M; HELLMAN U; MOKS T; UHLEN M
CS DEP. BIOCHEM., ROYAL INST. TECHNOL., S-100 44 STOCKHOLM, SWEDEN.
SO PROC NATL ACAD SCI U S A, (1989) 86 (12), 4367-4371.
CODEN: PNASA6. ISSN: 0027-8424.
FS BA; OLD
LA English
AB A dual affinity fusion concept has been developed in which the gene encoding the desired product is fused between two flanking **heterologous** genes encoding IgG- and **albumin**-binding domains. Using sequential IgG and serum **albumin** affinity chromatography, a full-length tripartite **fusion protein** is obtained. The approach was used to recover a full-length fusion product in Escherichia coli containing the human insulin-like growth factor II (IGF-II). Surprisingly, the recombinant IGF-II showed increased stability against proteolytic degradation in E. coli when produced as a dual affinity **fusion protein**, as compared to an N-terminal **fusion protein**. After site-specific cleavage of the tripartite **fusion protein**, IGF-II molecules with immunological and receptor binding activity were obtained without renaturation steps. The results demonstrate that proteins can fold into biologically active structures, even if provided with large flanking **heterologous** protein domains. The concept was further used to characterize the specific degradation of recombinant IGF-II in this **heterologous** host.

IT Miscellaneous Descriptors
ESCHERICHIA-COLI IMMUNOGLOBULIN G-BINDING DOMAIN **ALBUMIN**

-BINDING DOMAIN RECEPTOR BINDING AFFINITY MOLECULAR **SEQUENCE** DATA DNA **SEQUENCE** AMINO ACID **SEQUENCE** AFFINITY CHROMATOGRAPHY

RN 61912-98-9 (INSULIN-LIKE GROWTH FACTOR)
68-19-9Q, 9001-26-7Q (INSULIN-LIKE GROWTH FACTOR II)